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Immigration, Business Ownership and Employment in Canada

by David Green, Huju Liu, Yuri Ostrovsky and Garnett Picot

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^{r} revised
x suppressed to meet the confidentiality requirements of the *Statistics Act*
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Abstract

This paper provides, for the first time, an overview of immigrant business ownership and the associated employment in Canada. The focus is on ownership of private incorporated firms and on the unincorporated self-employed. Immigrants are entrepreneurial. While immigrant business ownership rates are low immediately after entry, after four to eight years in Canada they surpass those of the comparison group (largely Canadian-born). However, among *private incorporated firms*, immigrant-owned businesses tend to be smaller than those owned by the Canadian-born. Hence, on a per capita basis, the job creation rate via ownership of private incorporated companies was lower among immigrants than the Canadian-born. However, the per capita job creation rate via *unincorporated self-employment* was higher among immigrants than the Canadian-born. For almost one-half of the unincorporated self-employed immigrants, self-employment was a secondary activity; most of their earnings came from paid jobs. Ownership rates vary significantly by education, age, source region and gender of the immigrant. Business class immigrants have the highest propensity for business ownership, but, since this is a small group, they accounted for little of all immigrant business ownership and job creation in 2010. Immigrants in the economic class accounted for the largest share, and, although not selected for economic reasons, immigrants in the family and refugee classes accounted for 40% to 50% of all immigrant business ownership. This paper also compares the industrial distribution of immigrant-owned businesses with that of businesses owned by the Canadian-born population.

Keywords: immigration, immigrant entrepreneurs, job creation, business ownership, entrepreneurship

Note: In this study, the term "job creation" refers to all workers employed by businesses owned by immigrants or the Canadian-born. It should not be interpreted as referring to jobs or employees only in start-up firms.

Executive summary

This paper provides, for the first time, an overview of immigrant business ownership and the associated employment in Canada. This research is possible because a new dataset has been created in which the immigration status of business owners can be determined. The analysis focuses on two types of businesses: private incorporated businesses[1] and the unincorporated self-employed.[2] Results are presented for immigrants who have entered Canada since 1980 and who were in the country in 2010, hereafter simply referred to as immigrants in Canada. In addition, two entering cohorts of immigrants are tracked to determine the business ownership trajectory during the first 5 to 10 years in Canada.

Immigrants are entrepreneurial. In the first few years after entry in Canada, they understandably have relatively low rates of business ownership and job creation compared with the Canadian-born population. But these outcomes change quickly with years spent in Canada, so that after four to seven years, the propensity to own a private incorporated business or to be unincorporated self-employed surpasses that of the Canadian-born population.

Data from 2010 indicate that rates of private business ownership and unincorporated self-employment were higher among immigrants than among the Canadian-born population. However, average firm size was smaller among immigrant-owned private incorporated businesses than among similar firms owned by members of the comparison group (mainly Canadian-born), for potentially many reasons. Immigrant-owned firms may be in industries where firms tend to be smaller. It may also be that privately owned firms take a generation or more to attain a significant size, by which time a firm started by an immigrant would be considered to be owned by a Canadian-born person. In general, immigrant-owned firms would likely tend to be younger than Canadian-owned firms, resulting in smaller firm sizes. The population of longer-term immigrants (those who have been in Canada for 10 to 30 years) is used in comparisons with the Canadian-born population so that the aggregate rates of business ownership and job creation are not affected by the low rates among more recent immigrants. This study finds that the higher propensity to own a private incorporated business is offset by the smaller firm size, so that on a per capita basis, the rate of job creation in 2010 via private incorporated companies was lower for longer-term immigrants than for the comparison group (mainly Canadian-born).

For almost one-half (46%) of the unincorporated self-employed immigrants, self-employment is secondary to paid work; their earnings from a paid job are greater than their self-employment earnings, often very much so. For many, self-employment is a secondary activity. One-half of these secondary self-employment jobs are in real estate, either as rental providers or managers, or as brokers. For the remaining 54% of unincorporated primarily self-employed immigrants, self-employment is their main source of earnings. But very few, perhaps 3%, have paid employees; they primarily create jobs for themselves. Since the propensity to be primarily self-employed is higher among immigrants than among the Canadian-born population (the comparison group), job creation by self-employment is higher among immigrants.

Thus, job creation from private incorporated businesses is greater among the comparison group than among immigrants, and the opposite is true for job creation from unincorporated self-employment. This is the first time in Canada that such estimates of job creation among immigrants, and the associated comparisons, have been presented.

Over one-half of immigrant-owned private incorporated businesses were in five broad industries in 2010, in order of size: professional, scientific and technical services; retail trade;

1. Incorporated companies that are privately owned are required to file a T2 corporate tax return. Those that are owned by Canadian citizens or permanent residents also file a Schedule 50, which enables the determination of the owner's immigration status. Individuals identified as immigrant owners are included in the sample. Publicly owned companies are excluded.
2. The unincorporated self-employed are those who file a T1 individual tax return.

accommodation and food services; transportation and warehousing; and construction. Among the immigrant unincorporated primarily self-employed, about three-quarters were in six industries, in order of size: real estate and rental and leasing; administrative and support, waste management and remediation services; health care and social assistance; professional, scientific and technical services; transportation and warehousing; and construction. Overall, the industrial distribution of immigrant-owned private incorporated companies differed significantly from that of the Canadian-born population. However, among the primarily self-employed, immigrants tended to work in roughly the same kinds of industries as the Canadian-born population.

Immigrants who entered Canada in the business class had a higher propensity for business ownership (private or unincorporated self-employed) than those in the economic, family or refugee classes. However, the business class is quite small, so it accounted for only 12% of private business ownership and 9% of primary self-employment among immigrants in 2010. Immigrants in the economic class accounted for the largest share, at around 40%. Even though the family class immigrants and refugees were not selected for economic reasons, they had about the same propensity to be private business owners or to be primarily self-employed as the economic class members. These two classes accounted for a significant share (about 40%) of private incorporated company ownership and for 47% of the primarily self-employed immigrants.

Immigrant private business owners and self-employed immigrants come from all educational groups, but the more highly educated immigrants are more likely to be owners than their less educated counterparts. However, almost one-half of immigrant owners in 2010 had a high-school education or less. Similarly, immigrant business owners come from all source countries, but those from English-speaking countries and Western Europe registered the highest rate of business ownership (incorporated and unincorporated), followed by immigrants from China and India. Immigrants from Africa, Southeast Asia and Latin America were the least likely to be private business owners or otherwise self-employed. As with the non-immigrant population, roughly two-thirds of owners were men. The ownership rates among immigrants in 2010 varied by age; the age group of 45- to 54-year-olds had the highest rates, perhaps in part because of the importance of wealth levels in business ownership.

1 Introduction

A central question in the study of immigration is whether immigration generates economic growth in the host country. Researchers have hypothesized that immigrants can have a net positive impact on growth by contributing specific, scarce skills; by lowering the average age of the workforce; by contributing to innovation; and by simply increasing the scale of the workforce. In addition, immigrant entrepreneurs have the potential to make direct contributions by starting new businesses. Indeed, if entrepreneurial talent is a scarce resource, then the inclusion in an immigrant inflow of (eventually) successful entrepreneurs may be necessary for that inflow to have a positive effect on intensive—as opposed to extensive—economic growth. The hope that immigrant entrepreneurs can have this impact has led many host countries to develop policies that are aimed at attracting immigrant entrepreneurs. But, while there is a growing literature on the characteristics of immigrant entrepreneurs (or, more precisely, the immigrant self-employed), there is very little evidence on the key question of how much immigrant entrepreneurs and the businesses they create contribute to job growth (Fairlie and Lofstrom 2013).

The lack of evidence of job growth stems largely from the lack of appropriate data to tackle the issue. In the 1980s, longitudinal firm-level microdata sets were created to allow researchers to address issues such as the role of small and large firms in job creation. However, the role of immigrant entrepreneurs in job creation escaped the grasp of researchers, largely because of their inability to identify the immigration status of business owners. A new dataset created by the Canadian Centre for Data Development and Economic Research within Statistics Canada, and funded in part by Citizenship and Immigration Canada, has now solved that problem for the first time. The dataset is referred to as the Canadian Employer-Employee Dynamics Database (CEEDD). This study uses a variant of these data that links worker and firm tax files with immigrant landing records to examine immigrant entrepreneurship.

The goal of this paper is to provide, for the first time, basic data regarding ownership and employment creation by two groups of entrepreneurs: immigrant owners of private incorporated businesses and unincorporated self-employed immigrants. To provide a benchmark, the results are compared with those for a comparison group[3] that consists largely of Canadian-born people. The data cover the period from 2000 to 2010. The analysis in this paper is presented in two forms. First, the job-creation activity of immigrants[4] in Canada in a specific year, 2010, is presented. This provides an overview of immigrant ownership activity at a given point in time. But, of equal, or perhaps greater, interest is the evolution of ownership and job-creation activity among new immigrants in the years after entry to Canada. This paper provides evidence on this by tracking entering cohorts of immigrants for a number of years to determine how business ownership and employment generation evolves.

Using these data, this paper provides a descriptive analysis of the following key questions related to immigrant entrepreneurship:

- What is the prevalence of business ownership and self-employment among immigrant cohorts? How does it change with years in Canada? How does it compare with that of the Canadian-born population?
- Among which types of immigrants are business ownership and self-employment most prevalent (focusing on age, education, immigrant class and source country)?
- How many jobs are associated with immigrant entrepreneurial activity, and how does this compare with businesses owned by non-immigrants?

3. The comparison group consists of all Canadian-born people, plus immigrants who entered Canada prior to 1980. Ninety-three percent of the comparison group are estimated to be Canadian-born.
4. Because of limitations in the Longitudinal Immigration Database (IMDB), one can identify only immigrants who have entered Canada since 1980. Hence, in this study, 'immigrants' means those who have entered since 1980. Similarly, the comparison group includes all Canadian-born people, plus immigrants who entered Canada prior to 1980.

- In what industries are immigrant-owned businesses and self-employed immigrants concentrated, and how does this compare with the Canadian-born population?
- How do the features mentioned above evolve as an entering immigrant cohort ages, with increasing years spent in Canada? That is, what is the pattern of 'assimilation' regarding business ownership and job creation?

Much of the previous Canadian literature on immigrant entrepreneurship used census and survey data, with entrepreneur status being defined based on questions on self-employment (Schuetze 2010). These studies generated some interesting findings, but cannot provide any evidence on employment at immigrant-owned firms, which is the ultimate aim of this paper. The only other paper of which the authors are aware that studies immigrants in a similar way is by Li (2001). In that paper, the author studied the propensity for self-employment among immigrants to Canada using aggregate data from the Longitudinal Immigration Database (IMDB) (the same landing records linked to personal income tax data used here). He focused on the landing cohorts between 1980 and 1994, using data that extended to 1995, and found that the propensity for self-employment increased with years spent in Canada. For example, among the 1980 landing cohort, 5% to 8% engaged in self-employment during the first three years. After 10 years in Canada, this figure increased to 16%. A number of other factors increased the odds of being self-employed, including entering Canada during strong economic growth, being highly educated, being from Europe, and being male. Li concluded that immigrants often use self-employment to supplement wage and salary income, rather than necessarily using it as their main activity. Like the survey-based evidence, Li's work does not examine employment generated by the firms. It also does not include the private incorporated firms that form a key part of the analysis in this paper.

The remainder of the paper is organized as follows. Section 2 briefly describes the data sources used in the analysis. Section 3 provides a snapshot of immigrant-owned private incorporated companies in 2010. Section 4 looks at the immigrant ownership dynamics during the first 10 years in Canada. Unincorporated self-employment among immigrants is discussed in Section 5. Section 6 documents self-employment trajectories of immigrants who arrived in Canada in 2004. Finally, Section 7 summarizes the main findings and offers conclusions.

2 Data

The analysis in this paper is built around the CEEDD, which links worker and firm tax files. The variant of the CEEDD used for this research draws on a number of linked datasets. See Appendix A for a detailed description of the datasets, which include the following:

- corporate tax data (T2 data, tax returns for all incorporated businesses)
- individual tax data (T1 data; tax returns for all individuals, including the unincorporated self-employed)
- T4 records of remuneration issued by all businesses to their employees
- the Longitudinal Employment Analysis Program (LEAP) dataset (a longitudinal file of all businesses with employees)
- the IMDB (a longitudinal file of all immigrants who have entered Canada since 1980).

The key to the analysis in this paper is the Schedule 50 that all private incorporated businesses owned by Canadian citizens or permanent residents are required to file with their T2 corporate

tax return. This document identifies all owners with at least a 10% share in the business.[5] This ownership list is linked to the IMDB to determine which owners are immigrants who have arrived since 1980. In this way, the key data problem confronting researchers up to this time is solved.

Immigrants aged 18 to 69 in the year of interest are included in this analysis. Because of data restrictions, immigrants in this study are those who have entered Canada since 1980—i.e., the study excludes all immigrants who have been in Canada for 30 years or more. The immigrants who are included represent 75% of all immigrants in Canada in 2011.[6] Hence, in the 2010 snapshot presented later, the absolute numbers—e.g., the total number of jobs and companies associated with immigrants—underestimate the total for the entire immigrant population in 2010. To provide a better comparison between all immigrants and the Canadian-born population of the aggregate propensity for self-employment in 2010, data from the Labour Force Survey (LFS)[7] are used briefly. Of greater interest are the comparisons, based on CEEDD data, among different groups of immigrants, focusing on which groups tend to have higher prevalence rates of business ownership and higher shares of job creation.

A number of ownership possibilities are open to immigrants. An immigrant can start or become a part or sole owner of a private (not publicly traded) incorporated company, which must file a corporate tax return (T2). As will be seen, such companies are typically small. If a company has at least one owner (with more than 10% of the shares) who is an immigrant, the business is said to be immigrant-owned. Data are produced for both immigrant-owned businesses and all other private incorporated businesses. Only private incorporated businesses owned by Canadian citizens or permanent residents that have employees are included, since the focus is on job creation.

An immigrant could buy shares in a publicly traded company, and hence acquire some (typically small) ownership. This type of ownership is excluded from the analysis, since such shareholders are not viewed as entrepreneurs involved in a company's development.[8]

An immigrant could also become an unincorporated self-employed person, with or without employees. In either case, this person is creating jobs, for himself or herself, and for others as well in some cases. All the unincorporated self-employed people who file an individual tax return (T1) reporting self-employed business activity, both immigrants and the Canadian-born population, are included in the study.

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5. Approximately 18.4% of private businesses did not file a Schedule 50 or filed Schedule 50 forms with missing shareholder information in 2010. To ensure that this non-response does not result in an underestimate of the total count of private businesses and their employees, a weight that is the ratio of all businesses divided by the number with a Schedule 50 in every year from 2001 to 2010 is computed. Applying this weight renders the business count (and associated characteristics and employment) equal to the known total derived from the T2 data. A second weighting process is also applied. Within the Schedule 50, a few owners did not report a social insurance number (SIN). So as to not undercount the number of owners, the number of owners with SINs is reweighted within province, industry and firm cells. The weight for each cell is the ratio of the total number of owners divided by the number with SINs. Applying the weight brings the number of owners with SINs to the known total for that cell. Both of these reweighting exercises are based on the assumptions that businesses that do not file a Schedule 50 are similar to those that do, and that the owners without a SIN resemble those who have one, in terms of ownership. However, Since the non-response is quite low, the reweighted results are believed to be reliable.
6. This figure is from the 2011 National Household Survey, and refers to those aged 18 to 69.
7. Although it provides aggregate comparisons, the LFS has other limitations when compared with CEEDD data. It only asks about self-employment; has no data on job creation among entrepreneurs; has no longitudinal capacity and presents sample-size challenges when making comparisons among smaller groups.
8. In the longitudinal analysis, it is possible that some incorporated immigrant-owned private companies make the transition to public companies during the study period, which is from 2000 to 2010. The employment in such public companies might reasonably be classified as having been generated under immigrant ownership. However, an investigation indicated that the number of such transitions was negligible (less than 0.1% of private firms make the transition every year on average), and hence such a possibility was not taken into account (see Appendix B for more information).

None of the data files used in this research have a reliable estimate of firms' employment. Hence, it is necessary to estimate employment based on the payroll of firms. This approach has been used in the LEAP file for over two decades. A company's employment in terms of average labour units (ALUs)[9] is calculated by dividing the total payroll of the company by the average earnings for all full- and part-time employees in the province, industry, and firm-size category to which the firm belongs. Thus, the ALU approach counts the number of 'typical' workers the firm employs, where what is typical is defined separately by province, industry, and firm-size category. The business owners are included in the ALU count if they receive a T4 (i.e., if they received wages or a salary from the company); otherwise, they are not.

3 Immigrant-owned private incorporated companies in 2010

3.1 The prevalence of ownership

Immigrants are entrepreneurial. LFS data indicate that 7.6% of all immigrants[10] in the labour force were incorporated self-employed in 2010, compared with 5.6% of the Canadian-born population. But the focus in this section is on ownership of private incorporated companies[11] among immigrants who have entered Canada since 1980.

Among these immigrants, 4.6% were owners of private incorporated businesses, compared with 4.8% of the comparison group (Table 1), suggesting that there is little difference between groups. But, as will be seen, and as one would expect, immigrants who have not been in Canada for many years have much lower rates of ownership. As they adjust to the Canadian economy with time spent in Canada, that rate rises. When recent immigrants are excluded and the focus is on those who have been in Canada for 10 to 30 years, the ownership rate is 5.8%, much higher than the rate for the comparison group (largely Canadian-born), at 4.8%. This observation is consistent with earlier studies that found that entrepreneurship, and specifically self-employment, is higher among the foreign-born than among the native-born in many countries, including the United States, the United Kingdom, Canada and Australia (Clark and Drinkwater 2000, 2010; Fairlie, Zissimopoulos and Krashinsky 2010).

3.2 What types of private companies do immigrants own, accounting for how many jobs?

Immigrant-owned businesses were more likely to be found in professional, scientific and technical services, retail trade, real estate and rental and leasing, accommodation and food services,

9 One could estimate employment using a simple head count of the number of employees working for the firm at any time during the year from the T4 file, but it would lack any indication of the extent of the employment of each individual. Computing an ALU based on the payroll adds this dimension. See Appendix A. The owner of the firm is included in the ALU count if he or she receives wages from the firm as reported by the receipt of a T4. Otherwise, he or she is not included in the employee count.

10 This figure corresponds to annual averages for immigrants aged 18 to 69.

11 Respondents who indicate that they are incorporated self-employed in the LFS may or may not be the same as the owners of private incorporated companies in the CEEDD data. To estimate prevalence rates in the CEEDD, the number of business owners is compared with the number of people who filed an individual tax return (over 80% of the working-age population aged 25 to 64 filed a tax return in 2009). On that basis, 5% of immigrant taxfilers who have entered Canada since 1980 were owners of private incorporated businesses in 2009 (they owned at least 10% of a private incorporated business in that year), compared with 5.2% of the comparison group, which includes the Canadian-born population, plus immigrants who entered before 1980 (Table 1). LFS data suggest that when defining the immigrant and the comparison groups in the same way, 6.5% of immigrants in the labour force were incorporated self-employed, compared with 6.0% of the comparison group. Immigrants who entered Canada prior to 1980 have much higher self-employment rates than those who have entered since 1980 (those used in the sample for the present study). The rates for the incorporated self-employed were 11.2% and 6.5%, respectively.

transportation and warehousing, and construction than other industries. These five industries accounted for over one-half of all immigrant-owned businesses in 2010 (Table 6). The remainder were distributed across a wide range of industries. The industrial distribution of immigrant-owned businesses differed significantly from that of private businesses owned by non-immigrants. Only 29% of the latter businesses were found in the five major industries mentioned above, with the big difference being a much lower share in accommodation and food services (Table 6).

Since firm size differs across industries, the distribution of immigrant-owned businesses does not necessarily reflect their job creation activity by industry. The distribution of employment (in FTEJs) shows that almost one-quarter of jobs associated with immigrant-owned private firms were in the accommodation sector (Table 7), although only 11.8% of firms were found there. These tend to be larger than the average immigrant-owned firm. The opposite is true for the professional, scientific and technical services sector. It accounted for 14.5% of firms and 7.4% of employment. From an employment perspective, accommodation and food services, retail trade, manufacturing, and health care and social assistance were the dominant industries, together accounting for about 55% of employment associated with immigrant-owned private corporations (Table 7).

Among the immigrant population that has entered Canada since 1980, immigrant-owned corporations tend to be small compared with private corporations owned by non-immigrants. Just under 62% of immigrant-owned businesses had one employee or fewer in 2010, compared with roughly one-quarter of private incorporated businesses owned by comparison group members. Very few immigrant-owned private businesses are large. 8.9% had 10 or more employees, compared with 17.7% of the comparison group companies (Table 8). Many immigrants in the sample have been in Canada for relatively few years, and this may tend to limit the size of their firms. However, even when focusing on longer-term immigrants who have been in Canada for 10 to 20 years, the average size of a private company was four employees for immigrant-owned private firms, compared with seven for the comparison group. These observations are consistent with U.S. results. Immigrant-owned firms have lower sales than firms owned by non-immigrants in the United States, and lower employment. For example, using a somewhat different and more inclusive definition of businesses, Fairlie and Lofstrom (2013) found that immigrants owned 14% of all businesses with employees in the United States, and accounted for roughly 10% of employees hired by these businesses.

Thus, immigrants are more likely to be owners of private incorporated businesses than non-immigrants, but the average immigrant-owned business (at least those owned by immigrants who have entered since 1980) generates fewer jobs. To assess the aggregate effect of the immigrant and non-immigrant population in job provision in any given year (here 2010), the following two ratios are simply multiplied together: $(BO / POP) * (JOBS / BO)$. BO is the number of business owners, POP is the population (the number of workers), and $JOBS$ is the total number of jobs produced by all businesses. This leads to a simple ratio of $JOBS / POP$, which is the number of jobs created relative to the size of the population. In this case, the ratio is the number of FTEJs of employment ($JOBS$) divided by the number of workers (POP).

To avoid penalizing the immigrant group by including immigrants who have been in Canada for very few years—those who tend to have lower ownership rates (see next section)—the focus in these calculations is on longer-term immigrants who have been in Canada for 10 to 30 years. In 2010, for these immigrants, the per capita job-creation rate for private incorporated firms was 0.170 and was 0.297 for the comparison group (Canadian-born population, plus immigrants who entered Canada prior to 1980).

To summarize, these results suggest that on a per capita basis, the job-creation activity of immigrant-owned private incorporated companies is substantially below that of their comparison-group counterparts, 93% of whom were born in Canada. The higher tendency of immigrants to be private business owners is more than offset by their lower average business size.

3.3 Who are the immigrant private business owners in Canada?

To begin to understand immigrant business ownership in a way that is useful to the policy community, it is important to know both the characteristics of current business owners, and the likelihood that immigrants in a particular group will become business owners.

In terms of demographics, both immigrant and non-immigrant business owners tend to be 35 to 54 years of age (over two-thirds) and male (two-thirds) (Tables 1 and 2). The underrepresentation of the young among entrepreneurs fits with earlier results showing that personal wealth is a major determinant of whether a person starts a business, and that the most common source of start-up capital for immigrant-owned businesses is personal or family savings. Hence, the very young face a significant barrier to business ownership (Fairlie and Lofstrom 2013).

Immigrants to Canada come from a wide range of source countries, and so do business owners; no region dominates (Table 3). There is also no significant concentration by education level: 40% of immigrants had a high-school education or less when they entered Canada, one-quarter had some university education, and just over one-third had a completed university degree (Table 4).

Perhaps not surprisingly, economic-class immigrants (skilled workers and provincial nominees) constitute the largest group, accounting for 60% of all immigrant private business owners in 2010. The business class,[1] which is quite small, accounted for about 10%. Hence, it is clearly not the case that immigrant entrepreneurs tend to enter primarily through the business class. Immigrants entering Canada through the family and refugee classes, two streams that are not selected for their economic contribution, accounted for almost 40% of immigrant business owners in 2010 (Table 5).

Perhaps of greater interest, particularly when attempting to better understand what drives aggregate immigrant entrepreneurial activity, is the prevalence of business ownership among different groups. The number of immigrant private business owners is compared with the number of immigrant landers in that same group.[2] Among both immigrants and non-immigrants, individuals in the age group of 45- to 54-year-olds were most likely to be owners of private incorporated businesses: 7% of immigrant landers were owners (Table 1). Individuals under the age of 35 were much less likely to be entrepreneurs. Men were about twice as likely to be owners as women among both immigrants and the comparison group (Table 2). Fairlie and Lofstrom (2013) note in their literature review that human capital is a major determinant of business ownership across many groups, and this holds for immigrants in Canada. Immigrants with a bachelor's degree were 1.2 times more likely to be owners of private companies than immigrants with a high-school education or less (Table 4). And immigrants from English-speaking countries (the United States, Australia, the United Kingdom, New Zealand, Ireland and South Africa) and Western Europe registered the highest likelihood of being owners: roughly 7% of these immigrant landers owned a private business. Immigrants from India and the region[3] and from China and the region[4] registered the next highest proportion of owners, at 3.1% and 2.2%, respectively. The lowest rates were observed among immigrants from Southeast Asia, Latin America and Africa (Table 3). Regarding immigrant classes, those in the business class were more likely to be owners, as one might expect: 9.1% of landers in this group were owners of a private incorporated business, compared with 5.0% among economic immigrants and 4.3% among the family class. However, for the economic and business classes, these data include dependants as well as the principal applicants. The dependants are less likely to be business owners than the principal

1) The business class consists of three subclasses: entrepreneurs, the self-employed, and investors. Over the past decade, the investor subclass has accounted for around 90% of the entire business class.

2) These estimates are unadjusted for the effects of other variables on the ownership rates. The rates reveal differences among groups in ownership, for whatever reason.

3) This refers to a region that includes India, Bangladesh, Sri Lanka and other very small nations in the region.

4) This refers to a region that includes China and smaller nations in the region.

applicants. Among principal applicants alone, 15% of the business class applicants were owners of private incorporated businesses (Table 5).

4 Private business ownership and job creation during immigrants' first 10 years in Canada

There is a well-known assimilation effect regarding economic outcomes of immigrants (Chiswick 1978). As immigrants improve their knowledge of the host country's language, formal and informal networks, customs, and labour markets, they find jobs or move to better and higher-paying jobs. A similar process may apply to business creation and ownership. Improved knowledge of the means of financing, the demand for various commodities, and business networks, and increased asset accumulation likely lead to rates of business ownership and job creation that increase with time spent in the host country (in this case, Canada).

To determine the extent to which an assimilation effect exists regarding business ownership and job creation, the study identifies all immigrants whose landing year was 2000 and who filed a tax return at any time between 2001 and 2010. The members of this entering cohort are then tracked—as a group—for 10 years, from the first full year in Canada, 2001, to 2010. There is some attrition among the cohort, as some members return to their home country or move on to others. However, such attrition is viewed as part of the process through which a given entering cohort contributes to job creation in Canada and, as such, is not a point of concern with the data.

4.1 The evolution of private business ownership and job creation among the 2000 entering cohort

The number of owners of private incorporated businesses rose steadily as the cohort aged, from about 1,700 in 2001 to about 8,000 in 2010 (Table 9).[16] The proportion of immigrant taxfilers who were business owners also increased, from 1.2% in 2001 to 5.3% in 2010 (Table 14). By 2010, the share of immigrants from the 2000 cohort who were business owners was higher than that observed among the comparison group (mainly Canadian-born), at 4.8%.[17] The tendency of immigrants to own private businesses surpasses that of the Canadian-born population after they have been in Canada for a decade.

The immigrant-owned businesses are mostly small, although the size does increase slowly as the cohort ages, as one might expect. In the first full year after landing, three-quarters of the businesses had fewer than two employees (Table 18). After 10 years in Canada, the size distribution shifted to the right somewhat; 66% of businesses had fewer than 2 employees, 28% had 2 to 10 employees, and 6% had more than 10. While the rate of business ownership of the 2000 entering immigrant cohort surpassed that of the Canadian-born population, the immigrant-owned firms were smaller. Among the comparison group in 2010, 45% of businesses employed

16. The numbers are weighted to address the non-filing issue with Schedule 50 forms. See footnote 5.

17. Part of the difference in the ownership rates between recent immigrants and the comparison group may be caused by age differences. Recent immigrants tend to be younger than the general Canadian population (or the comparison group), and younger people are less likely to be business owners. To account for this possibility, the immigrant ownership rates were age-adjusted by producing a hypothetical set of ownership rates for recent immigrants that would have been observed had the immigrants had the same age distribution as the comparison group. This adjustment did not make much difference. For example, for recent immigrants owning private incorporated businesses, the age-adjusted ownership rates increased from 1.4% in the 1st year to 4.6% in the 10th year, compared with 4.8% for the comparison group. For the unincorporated self-employed (reported later in the paper), the age-adjusted rates increased from 10.7% in the first year to 19.5% in the sixth year, compared with 16.1% for the comparison group. In this latter case, the age-adjusted numbers were almost identical to the unadjusted numbers.

fewer than 2 people, 37% had 2 to 10 employees, and 18% had more than 10 employees (Table 8).

As the number of immigrant-owned businesses increases with time in Canada, so too does the employment associated with them. Employment in private businesses owned by members of the 2000 cohort rose from 1,400 jobs—as measured in ALUs—to 7,070 after the cohort had been in Canada for 10 years (Table 17).

4.2 Comparisons with young labour-market entrants as business owners

To better understand how immigrant private business owners evolve over time after they land in Canada, the 2000 immigrant entering cohort is compared with comparison-group members who were 25 to 29 years old in 2000 and who were tracked over the subsequent 10 years in the same way as the 2000 immigrant cohort. Both new immigrants and the largely Canadian-born group of 25- to 29-year-olds tend to be new labour-market entrants, and would face many of the same challenges when attempting to develop an entrepreneurial presence. As noted earlier, the number of immigrant private business owners in the 2000 entering cohort increased four-fold between the 1st and 10th year in Canada. By way of contrast, the number of private business owners in the comparison group of 25- to 29-year-olds[18] increased three-fold over the 10 years, from 29,000 to 84,000. The 2000 immigrant cohort had a higher growth rate than did young people from the comparison group.

The study also compared the employment associated with the immigrant and comparison-group (aged 25 to 29) owners in the 2000 cohorts. On average, the number of jobs (ALUs) generated was much lower for the immigrant owners than the young owners in the comparison group. In 2001, the average number of ALUs per immigrant owner in the 2000 entering cohort was 1.2, compared with 2.6 per comparison-group owner in the 2000 cohort of 25- to 29-year-olds. By 2010, the ALUs had increased to 1.6 for immigrant owners and about 3.4 for young comparison-group owners. This is another indication that average firm size is smaller among immigrant-owned private firms than among those owned by comparison-group members.

4.3 The evolution of the characteristics of immigrant business owners in the 2000 entering cohort

The characteristics of the business owners in the 2000 entering cohort change along some dimensions as the cohort ages. Different groups have different assimilation experiences. The following are notable results:

- The business class played a major role initially, accounting for 46% of business owners in the first year in Canada (2001), but, by 2010, it accounted for only 11%, as the number of economic class and family class immigrant owners increased rapidly. By 2009, 59% of business owners were economic class immigrants and 23% were from the family class (Table 12).
- Because they constitute the largest groups of immigrants, immigrants from India and the region and from China and the region together also accounted for most business owners—43% by 2010. But the distribution by source region changes significantly as the cohort ages. English-speaking countries (the United Kingdom, the United States, Australia, etc.), China and Southeast Asian countries dominated during the early years in Canada, but, by 2010, the role played by Indian immigrants increased, and that by Southeast Asian immigrants and immigrants from English-speaking countries diminished. These changes

18. Members of the cohort of Canadian-born people aged 25 to 29 are owners of a private incorporated business if they have at least a 10% share in that business. The same definition is used for immigrant owners.

may have something to do with language, business networks and cultural differences, factors that change with time (Table 13).

This variation in outcomes with time in Canada is perhaps best observed using rates of business ownership—the share of taxfilers who are owners of private incorporated businesses.

Higher education is associated with a higher propensity to own a business, as was noted earlier, both in Canada and in many other countries. But that is not necessarily the case shortly after landing. At that time, the highly educated have ownership rates that are not much greater than those of the less-educated. During the first two full years in Canada, 1.1% of immigrant taxfilers with a high-school education or less were business owners, compared with 1.6% of holders of a bachelor's degree (Table 14). This gap widens as the more highly educated increase their rate of ownership much more quickly. By 2010, the numbers were 3.1% (high-school educated) and 7.6% (bachelor's degree holders). The same phenomenon is observed in earnings assimilation. For the 2000 entering cohort, there was little difference in entry earnings between less-educated immigrants and more highly educated immigrants. However, earnings growth was much higher among the more highly educated, and, after a decade, the returns on higher education increased significantly (Picot and Hou 2014).

The increase in the rate of ownership as the cohort ages also varies by immigrant class. During the first two full years in Canada, only business class immigrants had a significant ownership rate, at around 11% (Table 15). The rate actually fell with time spent in Canada, to 9.5% in 2010. Meanwhile, the rate for immigrants in the economic and family classes rose with time in Canada, reaching 6.1% and 4.7%, respectively, by 2010. The initial difference in ownership rates immediately after arrival is not surprising, since the business class immigrants were selected based on their willingness to start a business in Canada. But it is interesting that this dominance significantly deteriorates over time. It is particularly noteworthy that the convergence between the various entry classes occurs both because of movement into ownership by other immigrants and movement out by the business class. Future research will investigate whether the latter movement reflects emigration of business owners or a tendency to stay in Canada but stop owning a business among business class entrants.

There is also some variation in the growth in business ownership by source region. As noted above, the rate of ownership tends to be highest among immigrants from English-speaking countries and Western Europe, followed by India and China. But how they reach these levels of ownership varies. The 2000 cohort from English-speaking countries and Western Europe had relatively high rates of ownership right from entry (around 3% in the first year), and then doubled them to between 8% and 7% by 2010. Immigrants from India and the region and from China and the region had very low rates initially and achieved rates in the 6% to 7% range by 2010 (Table 16).

As is the case with earnings assimilation, short-run outcomes—during the first few years in Canada—are not representative of longer-run results. Evaluation programs tend to focus on the early outcomes simply because the data are available sooner. Such results can be misleading.

4.4 Immigrant business owners and related jobs in other cohorts

The results for the 2000 entering cohort may or may not be representative of the outcomes for other cohorts. This is assessed by considering data on the number of immigrant business owners and the number of jobs associated with immigrant-owned private businesses for other cohorts. The trajectory of both the number of business owners and the employment in immigrant-owned private businesses tends to be very similar for all entering immigrant cohorts from 2000 to 2007. Ownership and related employment grow at a similar rate for all cohorts (Table 19).

5 Unincorporated self-employment among immigrants in 2010

Immigrants are more likely to be self-employed than the Canadian-born population. LFS data suggest that 17.5% of all immigrants[19] in the labour force were self-employed in 2009, compared with 14.4% of the Canadian-born population.

But self-employment can be defined in a number of ways. In this paper, the analysis focuses on the unincorporated self-employed who file a T1 tax return and report self-employment earnings.[20] These self-employed individuals may or may not have paid workers, although the vast majority of them do not.

At least one earlier Canadian paper focused on the self-employment patterns of immigrants using data and definitions similar to those employed in this paper. Li (2001) studied the propensity for self-employment among immigrants to Canada using aggregate data from the IMDB. Focusing on the cohorts that landed between 1980 and 1994, and using data that extended to 1995, he found that the propensity for self-employment increased with years spent in Canada. For example, among the 1980 landing cohort, 5% to 8% engaged in self-employment during the first three years. After 10 years in Canada, this figure increased to 16%. A number of other factors also increased the odds of being self-employed, including entering Canada during a period of strong economic growth, being highly educated, being from Europe, and being male. Li concluded that immigrants often used self-employment to supplement wage and salary income, rather than as a primary activity.

This section of the paper extends Li's work in a number of ways. It updates his analysis to the 2000s, provides both a cross-sectional view (for 2010) and a longitudinal view (for the 2004 entering cohort) of self-employment, compares immigrants who have entered since 1980 and the comparison group[21] in terms of self-employment propensity, and focuses on those who are primarily self-employed as well as all those who are self-employed.

As Li (2001) noted, many self-employed immigrants appear to use self-employment as a supplement to paid work. Employment earnings exceed self-employment earnings for many self-employed immigrants. To better focus on people (both immigrants and people in the comparison group) for whom self-employment appears to be the main activity, a 'primarily' self-employed person is defined as one for whom annual self-employment earnings exceed employment earnings. In all cases, the samples consist of individuals aged 18 to 69.

5.1 Self-employment earnings

Most studies focus on the average earnings of the self-employed, but this part of the analysis begins with the distribution, which is more informative. Unincorporated self-employed immigrants in the bottom two earnings quintiles[22] reported very low or negative net self-employment earnings in 2010 (Table 23). Among immigrants, the bottom 20% of self-employed earners had average net self-employment earnings of −$5,600. The next quintile had average net self-employment earnings of only $1,000. However, these people had, on average, significant earnings from paid jobs, around $45,000 for the bottom quintile and $30,600 for the second quintile. Thus, it appears

19. This figure corresponds to annual averages for immigrants aged 18 to 69, both the incorporated and the unincorporated self-employed.
20. Being self-employed means reporting self-employment income, either positive or negative, in the annual T1 tax return, the type of return filed by the majority of Canadians. Unincorporated self-employed business owners are required to file an annual T1 tax return.
21. This comparison group includes the Canadian-born population, plus immigrants who entered Canada prior to 1980. Immigrants who entered prior to 1980 have higher self-employment rates (at 23.7% of the labour force) than both immigrants who entered later (at 15.3%) and the Canadian-born population (at 14.4%).
22. The bottom two earnings quintiles are the 40% with the lowest earnings.

that self-employment is not the primary economic activity for these immigrants, about half of whom are in the real-estate industry. Overall, 46% of self-employed immigrants in the study had employment earnings that exceeded their self-employment earnings. Put another way, about 54% of self-employed immigrants were primarily self-employed.

Earlier studies noted that the immigrant self-employed have lower earnings than their native-born counterparts. However, for the bottom four quintiles of the self-employed—i.e., 80% of the self-employed—immigrants have slightly higher average self-employment income (Table 23). It is only among the top 20% of the self-employed that self-employment earnings are significantly higher among the comparison group than among unincorporated self-employed immigrants ($68,000 compared with $42,000). Immigrants do not appear to be making it into the self-employment activities that have the highest economic returns.

5.2 Who are the self-employed?

The propensity for self-employment among immigrants varies according to a number of characteristics. Age matters. Individuals older than 35 are most likely to be self-employed (or primarily self-employed), both among immigrants and among the comparison group. For example, about 25% of immigrants aged 45 to 54 (who have entered Canada since 1980) have some form of self-employment, and 13% are primarily self-employed. This compares with 20% and 8%, respectively, among the 25- to 34-year-olds (Tables 21 and 22). This same pattern was observed among incorporated business owners and may be related to the need to acquire some capital and experience before starting a business.

Educational attainment also matters, but perhaps not as much as one might expect. Immigrants with higher educational attainment at arrival have a slightly higher propensity to be self-employed than those who are less educated. Of those entering with bachelor's degrees, 23% were self-employed (unincorporated) in 2010, compared with 18% of those with a high-school education or less (Table 24). However, almost one-half of the self-employed had a high-school education or less. Similar patterns hold for the primarily self-employed (Table 25). Just as for owners of incorporated businesses, higher levels of human capital (both education and experience) are associated with a slightly higher likelihood of being self-employed.

An immigrant's source region also affects his or her propensity for self-employment. As Li (2001) observed, based primarily on 1980s data, immigrants from Europe register a higher propensity for self-employment. About 25% of immigrants from that continent were self-employed, compared with a low of 13% to 16% for their counterparts from Africa, Latin America or Southeast Asia (Table 26). The patterns of incidence of primary self-employment are similar. The multi-ethnic composition of Canadian immigrants is evident in the immigrant self-employment data: no one region dominates.

As one might expect, the incidence of self-employment is highest among immigrants who entered in the business class; 24% were self-employed in 2010, and 16% were primarily self-employed (Table 27). However, these numbers are based on both the business class principal applicants and their dependants. Among business class principal applicants, 34% were self-employed (unincorporated) in 2010, and 26% were primarily self-employed (Table 27). The earlier analysis showed that about 15% of principal applicants in the business class were incorporated business owners in 2010. Thus, roughly 40% were serious business owners of some sort in 2010. But, the business class is relatively small—only 9% of the primarily self-employed entered in the business class. Three-quarters of the self-employed entered in the economic or family classes.

Interestingly, the rate of unincorporated self-employment—both primary self-employment and all self-employment—was as high among the refugee class as among the economic and family classes in 2010. This may be related to 'push' factors (no appropriate jobs available) or 'pull'

factors (desire to be an entrepreneur). In any case, almost half of the self-employed were in the family or refugee classes, where immigrants are not selected for economic reasons.

5.3 In what industries are the self-employed found?

Among the immigrant self-employed, real estate and rental and leasing is by far the largest single industry, accounting for over one-third of unincorporated self-employed immigrants (Table 28). But many of these entrepreneurs are looking to augment their wage and salary earnings. Only about 30% of the self-employed in the real-estate industry were primarily self-employed (Tables 28 and 29). This is not unique to immigrants, as the same pattern is observed among the comparison group, mainly Canadian-born: the real-estate industry is the largest single industry, but the majority of workers are not primarily self-employed.

In fact, the industrial distribution of the primarily self-employed immigrants is not very different from that of the comparison group (Table 29). The two exceptions are agriculture, forestry, fishing and hunting, where more of the comparison-group members are located, and transportation and warehousing, where more immigrants are found. Other than that, for both groups—immigrants and the comparison group—the main industries for the primarily self-employed are real estate and rental and leasing; administrative and support, waste management and remediation services;[23] health care and social assistance; professional, scientific and technical services; and construction.

The industrial distribution of self-employed immigrants (Table 28) is somewhat different from that observed above for private incorporated businesses (Table 7), suggesting that these are somewhat different types of firms. Notably, real estate and rental and leasing is virtually absent from private incorporated businesses, and the largest single group is professional, scientific and technical services (Table 6). Retail trade is much more prominent among private incorporated firms than among the primarily self-employed, as are accommodation and food services, which are virtually absent among the self-employed.

5.4 Job creation by the self-employed

The unincorporated self-employed potentially create jobs in two ways: by providing employment for themselves and by hiring other employees. However, very few of the unincorporated self-employed have employees (around 2.5%). Hence, most employment creation is truly self-employment. Unfortunately, there is no direct measure of the amount of employment—as measured by hours worked, for example—associated with each self-employment job. For many, this amount would be small. As noted earlier, for almost half of the self-employed immigrants, self-employment is secondary to paid work and does not constitute a primary source of employment or earnings. The secondary nature of unincorporated self-employment for many is evident from earnings data. In 2010, the average annual self-employment earnings for the 40% of unincorporated self-employed immigrants with the lowest self-employment earnings were −$2,300. The average earnings from paid jobs for these same immigrants were $38,000 (Table 23).

In the absence of any direct estimate of hours of employment, and since many unincorporated self-employed have not created a job for themselves so much as a secondary activity, it is assumed that the primarily self-employed—those for whom self-employment earnings exceed paid job earnings—have created one job: a job for themselves.

The rate of unincorporated self-employment tends to be low among very recent immigrants to Canada (see next section). This outcome tends to reduce the job-creation activity of the immigrant

23. This wide-ranging category includes travel agents, security guards, janitors and cleaners, and call-centre employees.

population, which consists of immigrants who have entered Canada since 1980. Hence, just as with the job-creation calculations for the private incorporated business sector, here the analysis turns to the longer-term immigrants aged 18 to 69 who have been in Canada for 10 to 30 years.

On that basis, the unincorporated self-employed longer-term immigrants created 259,000 jobs in 2010. In that year, 2.339 million longer-term immigrants filed tax returns. That population base generated about 0.116 jobs per capita through self-employment (i.e., the share of taxfilers who were primarily self-employed). The same calculation for the comparison group (primarily Canadian-born) suggests that the self-employed among this group provided 0.076 jobs per capita. The longer-term immigrant population had a lower per capita job-creation rate than the comparison group through private incorporated companies, but a higher job-creation rate through unincorporated self-employment.

6 The self-employment trajectory of the 2004 entering cohort

The share of any entering immigrant cohort that is self-employed increases with years in Canada (Li 2001). That was true during the 1980s and is still true in the 2000s. The present analysis focuses on immigrants who landed in 2004,[24] and tracks their self-employment experience to 2010. In this cohort, about 16,000 immigrants were self-employed immediately after landing (in 2005), rising to about 30,400 by 2010 (Table 31). The share of T1 filers in the 2004 cohort who were self-employed rose from 10.8% in 2005 to 19.6% by the end of the period (Table 31). The same pattern is observed among the primarily self-employed: the number rose from around 9,500 to around 17,100 (Table 31), and the share of the primarily self-employed among taxfilers increased from 6.3% to 11.1%.

6.1 Variation in self-employment trajectories

Not all immigrant groups experience the average self-employment trajectory outlined above. Some groups have relatively nigh self-employment rates immediately after entry and see little increase in the rate with time in Canada. Others require some years before they embrace self-employment in a significant way. The result is much more across-group variation in the self-employment rate immediately after entry than after five years in Canada.

This phenomenon is most evident when focusing on source country and immigrant class. Immigrants from Europe and English-speaking countries tend to have the highest self-employment rates, particularly immediately after entry. From 17% to 20% of the 2004 entering cohort from Europe and English-speaking countries were self-employed in 2005, compared with 7% to 10% from other regions. After six years in Canada, the self-employment rates for the European immigrants had increased by a factor of approximately 1.3, while the rates for immigrants from other regions had at least doubled over the same period (Table 32). Hence, while immigrants from Europe and English-speaking countries still had the highest self-employment rates, the gap between them and immigrants from other countries was much smaller. The same pattern holds for the primarily self-employed. The exceptions to these trends are Africa (excluding North Africa and the Middle East), Southeast Asia and Latin America. Immigrants from these regions had relatively low rates of primary self-employment, even after six years in Canada.

Not surprisingly, immigrants in the business class had the highest rate of self-employment, about 17% immediately after entry and about 26% after six years in Canada (Table 33). The primary

24. The longitudinal analysis of immigrant-owned private incorporated businesses focused on the 2000 entering cohort. For the unincorporated self-employed, 2005 was the first year for which a business number (BN) could be determined for the self-employed. This in turn allowed for the estimation of the number of employees (beyond the owner) associated with the self-employed firm, hence the focus on the 2004 immigrant cohort.

self-employment rate for this class rose from 12% to 20%. The immigrants in the family, economic and refugee classes started out with very low rates of primary self-employment, at 6%, but, after five years, they had almost doubled to around 11%. Interestingly, the rate of primary self-employment among refugees is equal to that in the family and economic classes.

7 Conclusion

In the first few years after entry to Canada, immigrants understandably have relatively low rates of business ownership and job creation compared with the Canadian-born population. But these outcomes change quickly with years spent in Canada, so that after four to seven years, the propensity to own a private incorporated business or to be unincorporated self-employed surpasses that of the Canadian-born population.

A substantial literature attempts to determine the extent to which the self-employed in particular are pushed into self-employment because of a lack of opportunities in the paid job market or pulled in by the desire to be an entrepreneur, earn a substantial income, have job flexibility, and so on. Using Statistics Canada's 2000 Survey of Self-employment, Hou and Wang (2011) concluded that perhaps one-third of immigrants in that year were self-employed because of an inability to find an appropriate paid job. This tendency to be pushed into self-employment was higher among recent immigrants,[25] at around 40%, and lower among the Canadian-born self-employed, at 20%.

For whatever reasons, rates of private business ownership and unincorporated self-employment are higher among immigrants than among the Canadian-born population. However, average firm size is smaller among immigrant-owned private incorporated businesses than among similar firms owned by members of the comparison group (mainly Canadian-born), for potentially many reasons. Immigrant-owned firms may be in industries where firms tend to be smaller. It may also be that privately owned firms take a generation or more to attain a significant size, by which time a firm started by an immigrant would be considered to be owned by a Canadian-born person. In general, immigrant-owned firms would likely tend to be younger than Canadian-owned firms, resulting in smaller firm sizes. Whatever the reason, among longer-term immigrants (those who have been in Canada for 10 to 30 years), the higher propensity to own a private incorporated business is offset by the smaller firm size, so that on a per capita basis, the rate of job creation in 2010 via private incorporated companies was lower for these longer-term immigrants than for the comparison group (mainly Canadian-born).

For almost one-half (46%) of the unincorporated self-employed immigrants, self-employment is secondary to paid work; their earnings from a paid job are greater than their self-employment earnings, often very much so. For many, self-employment is a secondary activity. One-half of these secondary self-employment jobs are in real estate, either as rental providers or brokers. For the remaining 54% of unincorporated primarily self-employed immigrants, self-employment is their main source of earnings. But very few, perhaps 3%, have paid employees; they primarily create jobs for themselves. Since the propensity to be primarily self-employed is higher among immigrants than among the Canadian-born population (the comparison group), job creation by self-employment is higher among immigrants.

Thus, job creation from private incorporated businesses is greater among the comparison group than among immigrants, and the opposite is true for job creation from unincorporated self-employment. This is the first time in Canada that such estimates of job creation among immigrants, and the associated comparisons, have been presented. Over one-half of immigrant-owned private incorporated businesses were in five broad industries in 2010, in order of size: professional, scientific and technical services; retail trade; accommodation and food services; transportation and warehousing; and construction. Among the immigrant unincorporated primarily self-employed, about three-quarters were in six industries, in order of size: real estate and rental and leasing; administrative and support, waste management and remediation services; health care and social assistance; professional, scientific and technical services; transportation and warehousing; and construction. Overall, the industrial distribution of immigrant-owned private incorporated companies differed significantly from that of the Canadian-born population.

25. Recent immigrants are those who have been in Canada for 10 years or less.

However, among the primarily self-employed, immigrants tended to work in roughly the same kinds of industries as the Canadian-born population.

Immigrants who entered Canada in the business class had a higher propensity for business ownership (private or unincorporated self-employed) than those in the economic, family or refugee classes. However, the business class is quite small, so it accounted for only 12% of private business ownership and 9% of primary self-employment among immigrants in 2010. Immigrants in the economic class accounted for the largest share, at around 40%. Even though the family class immigrants and refugees were not selected for economic reasons, they had about the same propensity to be private business owners or to be primarily self-employed as the economic class members. These two classes accounted for a significant share (about 40%) of private company ownership and for 47% of the primarily self-employed immigrants.

Finally, the propensity to be a private business owner or to be unincorporated self-employed varies depending on the immigrant's age, education, source region and gender. But all of these groups were strongly represented in business ownership and self-employment in 2010.

8 Tables

Table 1
Distribution of private incorporated business owners, by age group, 2010

	Distribution of owners		
	number	percent	share of taxfilers
Immigrants[1]			
24 years of age and younger	3,580	2.0	0.010
25 to 34 years of age	24,330	13.7	0.029
35 to 44 years of age	58,700	33.0	0.055
45 to 54 years of age	61,450	34.5	0.060
55 years of age and older	29,950	16.8	0.050
All age groups	178,020	100.0	0.046
Non-immigrants[2]			
24 years of age and younger	16,820	1.9	0.007
25 to 34 years of age	79,790	9.0	0.023
35 to 44 years of age	195,750	22.0	0.058
45 to 54 years of age	300,780	33.8	0.072
55 years of age and older	297,010	33.4	0.059
All age groups	890,240	100.0	0.049

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 2
Distribution of private incorporated business owners, by gender, 2010

	Distribution of owners		
	number	percent	share of taxfilers
Immigrants[1]			
Male	117,880	66.2	0.064
Female	60,110	33.8	0.030
All immigrants	177,990	100.0	0.046
Non-immigrants[2]			
Male	586,490	65.9	0.064
Female	303,740	34.1	0.033
All non-immigrants	890,240	100.0	0.049

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 3
Distribution of private incorporated business owners who are immigrants, by source region at arrival, 2010

	Distribution of immigrant owners		
	number	percent	share of welfare
Source region at arrival			
Unknown	8 990	5.1	0.049
English-speaking	27 750	15.8	0.059
Western Europe	13 100	8.8	0.073
Eastern Europe	18 930	10.6	0.067
North Africa and the Middle East	27 340	15.7	0.050
Africa, except North Africa and Middle East	3 010	1.7	0.017
India and the region	32 660	18.3	0.061
China and the region	21 920	12.3	0.052
Latin America	7 620	4.3	0.018
Southeast Asia	17 090	9.6	0.039
All source regions	178 020	100.3	0.046

1. Immigrants who have entered Canada since 1980.

Notes: English-speaking countries include the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa. The sum of the figures may not correspond to the totals shown because of rounding.

Sources: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 4
Distribution of private incorporated business owners who are immigrants, by education level at arrival, 2010

	Distribution of immigrant owners		
	number	percent	share of welfare
Education level at arrival			
High school or less	73 980	41.5	0.037
Some university	42 080	23.6	0.054
Bachelor's degree	44 140	24.8	0.059
Education greater than a bachelor's degree	17 840	10.1	0.059
All education levels at arrival	178 020	100.0	0.046

1. Immigrants who have entered Canada since 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Sources: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 5

Distribution of private incorporated business owners who are immigrants, by immigrant class, 2010

	Distribution of immigrant[1] owners		
	number	percent	share of workforce
Immigrant class			
Family class	45,750	28.0	0.040
Economic class	77,500	48.0	0.070
Business class	21,600	13.1	0.081
Refugee	20,160	11.3	0.030
Other	5,980	3.0	0.030
All immigrant classes	178,010	100.0	0.060
Principal applicants only			
Economic class	47,100	..	0.062
Business class	5,573	..	0.150

.. not applicable

1. Immigrants who have entered Canada since 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 6

Distribution of private incorporated businesses owned by immigrants and non-immigrants, by industry, 2010

	Distribution			
	Businesses owned by immigrants[1]		Businesses owned by non-immigrants[2]	
	number	percent	number	percent
Industry[3]				
Unknown	19,590	10.8	40,760	6.3
Agriculture, forestry, fishing and hunting	1,790	1.2	30,830	4.8
Mining, quarrying, and oil and gas extraction	270	0.2	7,020	1.2
Utilities	50	0.0	410	0.1
Construction	10,990	7.3	90,160	14.3
Manufacturing	5,850	3.8	36,270	5.4
Wholesale trade	7,630	5.3	39,800	5.4
Retail trade	16,200	11.2	61,320	9.8
Transportation and warehousing	12,270	8.5	29,110	4.5
Information and cultural industries	1,380	1.0	8,530	1.3
Finance and insurance	2,100	1.5	20,840	3.3
Real estate and rental and leasing	5,830	2.5	26,190	4.1
Professional, scientific and technical services	20,630	14.3	89,430	13.8
Management of companies and enterprises	620	0.6	10,700	1.7
Administrative services	5,190	3.6	29,870	4.6
Educational services	1,520	1.1	8,310	2.3
Health care and social assistance	10,370	7.2	56,630	8.1
Arts, entertainment and recreation	810	0.6	5,150	1.4
Accommodation and food services	16,090	11.1	52,810	8.1
Other services (except public administration)	7,800	5.4	41,660	6.4
Public administration	40	0.0	170	0.0
All industries	144,350	100.0	640,940	100.0

1. Immigrants who have entered Canada since 1980.

2. Canadian-born population, plus immigrants who entered Canada prior to 1980.

3. Industry is defined by the 2-digit North American Industry Classification System (NAICS) 2012 code.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 7

Distribution of employment in private incorporated businesses owned by immigrants and non-immigrants, by industry, 2019

	Distribution of employment[1]			
	Businesses owned by immigrants[2]		Businesses owned by non-immigrants[3]	
	FTE jobs	percent	FTE jobs	percent
Industry[4]				
Unknown	21,560	6.8	72,400	1.8
Agriculture, forestry, fishing and hunting	5,310	1.7	104,090	2.6
Mining, quarrying, and oil and gas extraction	530	0.1	32,630	0.7
Utilities	500	0.1	6,870	0.1
Construction	33,970	9.3	522,720	11.6
Manufacturing	36,020	9.1	461,340	10.5
Wholesale trade	20,150	5.9	288,970	6.5
Retail trade	71,980	15.8	690,090	15.7
Transportation and warehousing	16,660	3.8	168,460	4.0
Information and cultural industries	4,090	1.3	90,110	1.9
Finance and insurance	5,470	1.5	91,810	2.1
Real estate and rental and leasing	8,290	1.9	98,110	2.2
Professional, scientific and technical services	33,390	7.9	270,110	6.1
Management of companies and enterprises	1,910	0.9	66,290	1.5
Administrative and support, waste management and remediation services	28,550	5.9	268,120	6.7
Educational services	1,000	1.9	93,080	1.2
Health care and social assistance	38,080	8.9	305,980	7.9
Arts, entertainment and recreation	3,150	0.7	95,980	1.4
Accommodation and food services	104,640	20.1	318,630	11.8
Other services (except public administration)	21,350	6.7	210,970	6.6
Public administration	100	0.0	1,910	0.0
All industries	402,340	100.0	4,360,780	100.0

1. Employment figures are expressed in average labour units (FTE jobs).
2. Immigrants who have entered Canada since 1980.
3. Canadian-born population, plus immigrants who entered Canada prior to 1980.
4. Industry is defined by the 2-digit North American Industry Classification System (NAICS) 2012 codes.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Sources: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 8
Distribution of private incorporated businesses owned by immigrants and non-immigrants, by firm size, 2010

	Distribution			
	Businesses owned by immigrants[1]		Businesses owned by non-immigrants[2]	
	ALUs	percent	ALUs	percent
Firm size (number of employees[3])				
0 to 0.99	56,820	39.4	171,340	26.7
1 to 1.99	28,910	20.0	116,430	18.1
2 to 3.99	24,330	16.9	120,220	18.7
4 to 9.99	21,400	14.8	120,620	18.8
10 to 24.99	8,850	6.1	68,880	10.7
25 to 49.99	2,620	1.8	25,820	4.0
50 and more	1,430	1.0	19,530	3.0
All firms	144,360	100.0	642,840	100.0

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.
3. The number of employees is expressed in average labour units (ALUs).

Note: The sum of the figures may not correspond to the totals shown because of rounding.
Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 9
Number private incorporated business owners, by age group at landing and year, 2000 immigrant cohort

	Age group at landing					
Year	24 and younger	25 to 34	35 to 44	45 to 54	55 and older	Total
			number			
2001	90	500	750	340	80	1,760
2002	170	780	1,090	500	100	2,630
2003	270	970	1,220	510	100	3,070
2004	400	1,290	1,430	490	90	3,710
2005	570	1,640	1,590	510	90	4,390
2006	760	2,010	1,730	510	80	5,090
2007	1,050	2,450	1,960	520	60	6,050
2008	1,320	2,850	2,140	510	60	6,890
2009	1,530	3,030	2,210	510	50	7,330
2010	1,730	3,340	2,340	540	40	7,990

Note: The sum of the figures may not correspond to the totals shown because of rounding.
Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 10
Distribution of private incorporated business owners, by gender and year, 2000 immigrant cohort

Year	Distribution of owners	
	Male	Female
	percent	
2001	64.2	35.8
2002	65.4	34.6
2003	64.7	35.3
2004	63.5	36.5
2005	64.2	35.8
2006	64.8	35.2
2007	65.7	34.3
2008	65.7	34.3
2009	65.4	34.6
2010	65.8	34.2

Note: In any given year, the percentage of male and female owners equals 100. The sum of the figures may not correspond to this total because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 11
Distribution of private incorporated business owners, by education level at landing and year, 2000 immigrant cohort

Year	Education level at landing			
	High school or less	Some university	Bachelor's degree	Education greater than a bachelor's degree
	percent			
2001	26.1	24.5	33.2	16.2
2002	24.9	23.6	35.5	16.1
2003	23.5	23.7	36.4	16.4
2004	23.2	23.5	37.0	16.2
2005	23.1	22.5	38.0	16.4
2006	23.0	21.6	39.1	16.3
2007	24.2	21.2	38.6	16.0
2008	25.3	20.9	37.9	16.0
2009	26.1	20.8	37.6	15.6
2010	26.4	20.4	37.9	15.3

Note: In any given year, the percentage of all education levels equals 100. The sum of the figures may not correspond to this total because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 12
Distribution of private incorporated business owners, by immigrant class and year, 2000 immigrant cohort

	Immigrant class				
Year	Family class	Economic class	Business class	Refugees	Other
			percent		
2001	14.3	38.2	45.5	1.7	0.3
2002	12.8	42.3	42.2	2.4	0.3
2003	14.6	47.3	34.2	3.5	0.5
2004	16.9	52.2	26.5	4.0	0.4
2005	19.0	54.9	21.5	4.2	0.4
2006	19.2	57.7	17.8	4.8	0.5
2007	21.5	57.3	15.1	5.7	0.4
2008	22.4	58.0	12.8	6.2	0.6
2009	23.0	58.3	11.5	6.7	0.5
2010	23.2	58.5	10.6	7.3	0.4

Note: In any given year, the percentage of all immigrant classes equals 100. The sum of the figures may not correspond to this total because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 13
Distribution of private incorporated business owners, by source region and year, 2000 immigrant cohort

	Source region								
Year	English-speaking	Western Europe	Eastern Europe	North Africa and the Middle East	Africa[1]	India[2]	China[3]	Latin America	Southeast Asia
					percent				
2001	16.2	9.0	6.2	12.6	0.5	7.4	25.3	3.0	19.2
2002	13.9	7.3	6.4	15.3	0.7	8.7	24.8	2.7	19.5
2003	12.5	6.5	6.6	16.5	0.8	10.3	24.3	3.1	18.8
2004	12.2	6.2	7.9	16.1	0.8	12.5	23.6	3.3	16.8
2005	11.1	6.0	9.1	15.2	1.0	14.8	23.2	3.4	15.8
2006	10.6	5.4	9.2	15.6	1.1	17.3	22.5	3.2	14.7
2007	10.1	5.1	9.3	15.3	1.3	20.3	21.9	2.9	13.2
2008	9.8	4.6	9.9	15.4	1.3	22.4	20.8	3.3	12.1
2009	9.4	4.6	10.5	15.8	1.2	23.2	20.3	3.0	11.6
2010	9.0	4.3	11.1	16.2	1.4	23.2	19.7	3.4	11.3

1. Excluding North Africa and the Middle East.
2. Including Sri Lanka, Bangladesh and several smaller countries in the region.
3. Including several other countries in the region.

Note: English-speaking countries include the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa. In any given year, the percentage of all source regions equals 100. The sum of the figures may not correspond to this total because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 14
Share of taxfilers who are private incorporated business owners, by education level at landing and year, 2000 immigrant cohort

	Education level at landing				
Year	High school or less	Some university	Bachelor's degree	Education greater than a bachelor's degree	Total
			share		
2001	0.009	0.014	0.012	0.014	0.012
2002	0.013	0.020	0.020	0.022	0.018
2003	0.013	0.024	0.024	0.026	0.020
2004	0.015	0.029	0.030	0.032	0.024
2005	0.017	0.033	0.037	0.040	0.029
2006	0.019	0.038	0.046	0.047	0.034
2007	0.023	0.045	0.055	0.057	0.040
2008	0.027	0.051	0.063	0.067	0.045
2009	0.029	0.055	0.068	0.072	0.049
2010	0.031	0.060	0.076	0.078	0.053

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 15
Share of taxfilers who are private incorporated business owners, by immigrant class and year, 2000 immigrant cohort

	Immigrant class				
Year	Family class	Economic class	Business class	Refugees	Other
			share		
2001	0.006	0.009	0.099	0.002	0.002
2002	0.008	0.015	0.132	0.003	0.003
2003	0.010	0.019	0.121	0.005	0.005
2004	0.015	0.025	0.110	0.007	0.006
2005	0.020	0.032	0.104	0.009	0.006
2006	0.023	0.039	0.100	0.012	0.008
2007	0.031	0.046	0.101	0.016	0.009
2008	0.038	0.052	0.097	0.019	0.014
2009	0.042	0.056	0.093	0.022	0.013
2010	0.047	0.061	0.095	0.026	0.012

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 16
Share of taxfilers who are private incorporated business owners, by source region and year, 2000 immigrant cohort

	Source region								
Year	English-speaking	Western Europe	Eastern Europe	North Africa and the Middle East	Africa[1]	India[2]	China[3]	Latin America	Southeast Asia
					share				
2001	0.029	0.030	0.006	0.008	0.001	0.005	0.017	0.005	0.021
2002	0.037	0.038	0.009	0.015	0.003	0.009	0.024	0.006	0.031
2003	0.039	0.039	0.011	0.018	0.003	0.012	0.028	0.008	0.034
2004	0.046	0.046	0.016	0.022	0.004	0.017	0.033	0.011	0.037
2005	0.051	0.054	0.021	0.024	0.006	0.024	0.039	0.013	0.040
2006	0.057	0.057	0.024	0.029	0.008	0.033	0.045	0.014	0.043
2007	0.065	0.064	0.029	0.034	0.010	0.046	0.052	0.015	0.046
2008	0.071	0.066	0.035	0.039	0.012	0.058	0.057	0.019	0.047
2009	0.074	0.070	0.040	0.043	0.013	0.064	0.060	0.019	0.048
2010	0.077	0.070	0.046	0.047	0.015	0.070	0.064	0.023	0.051

1. Excluding North Africa and the Middle East.
2. Including Sri Lanka, Bangladesh and several smaller countries in the region.
3. Including several other countries in the region.

Note: English-speaking countries include the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 17
Number of private incorporated businesses owned by immigrants, by firm size and year, 2000 immigrant cohort

	Firm size (number of employees[1])							
Year	0 to 0.99	1 to 1.99	2 to 3.99	4 to 9.99	10 to 24.99	25 to 49.99	50 and more	Total
				number				
2001	770	260	170	140	50	x	x	1,400
2002	1,050	420	300	210	70	x	x	2,080
2003	1,150	510	400	280	100	x	x	2,450
2004	1,450	570	490	350	110	x	x	3,010
2005	1,700	770	580	410	130	20	10	3,630
2006	2,010	900	670	520	160	30	10	4,300
2007	2,400	1,140	800	620	210	50	20	5,250
2008	2,740	1,260	930	740	230	60	30	6,000
2009	2,900	1,310	990	810	310	70	40	6,420
2010	3,190	1,470	1,090	900	310	80	30	7,070

x suppressed to meet the confidentiality requirements of the *Statistics Act*

1. The number of employees is expressed in average labour units.

Note: The sum of the figures may not correspond to the totals shown because of rounding and data suppression.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 18
Distribution of private incorporated businesses owned by immigrants, by firm size and year, 2000 immigrant cohort

	Firm size (number of employees[1])						
Year	0 to 0.99	1 to 1.99	2 to 3.99	4 to 9.99	10 to 24.99	25 to 49.99	50 and more
				percent			
2001	55.1	18.3	12.0	9.8	3.3	x	x
2002	50.5	20.2	14.6	9.9	3.6	x	x
2003	46.9	20.7	16.1	11.4	4.1	x	x
2004	48.1	19.1	16.3	11.7	3.8	x	x
2005	46.9	21.3	16.1	11.3	3.5	0.7	0.3
2006	46.7	20.8	15.6	12.2	3.7	0.7	0.2
2007	45.8	21.7	15.3	11.8	4.1	0.9	0.4
2008	45.7	21.0	15.5	12.4	3.9	0.9	0.5
2009	45.2	20.5	15.4	12.6	4.8	1.0	0.5
2010	45.1	20.7	15.4	12.7	4.4	1.2	0.5

x suppressed to meet the confidentiality requirements of the *Statistics Act*

1. The number of employees is expressed in average labour units.

Note: In any given year, the percentage of all businesses equals 100. The sum of the figures may not correspond to this total because of rounding and data suppression.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 19
Total employment in private incorporated businesses owned by immigrants, by year, 2000-to-2009 immigrant cohorts

	Immigrant cohort									
Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
					average labour units[1]					
2001	2,260	...	...	...	...	...	...	...	...	...
2002	3,460	2,540	...	...	...	...	...	...	...	...
2003	4,440	3,910	1,690	...	...	...	...	...	...	...
2004	5,130	4,840	2,960	1,790	...	...	...	...	...	...
2005	6,450	6,240	4,050	2,870	1,990	...	...	...	...	...
2006	7,600	8,170	5,260	4,140	3,400	2,550	...	...	...	...
2007	9,640	10,030	7,170	5,720	5,160	4,330	3,120	...	...	...
2008	11,300	11,900	8,790	7,110	6,820	5,800	4,870	2,520	...	...
2009	12,850	13,160	10,030	8,590	8,010	7,260	6,320	4,020	2,690	...
2010	14,070	14,640	11,000	10,410	9,510	9,130	7,830	5,510	4,320	3,010

... not applicable

1. Employment is determined using the average labour unit (ALU) calculations (see Appendix A) and adjusted according to the immigrant owner's ownership share.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 20
Total employment in private incorporated businesses owned by immigrants, by industry and year, 2000 immigrant cohort

Industry[1]	Year									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	average labour units[2]									
Unknown	20	70	240	450	530	1,280	3,890	3,280	5,730	9,800
Agriculture, forestry, fishing and hunting	20	30	60	110	160	180	300	310	440	530
Mining, quarrying, and oil and gas extraction	x	x	x	x	x	x	x	x	180	230
Utilities	x	x	x	x	x	x	x	x	100	110
Construction	50	90	200	370	730	1,250	1,910	2,940	3,270	3,860
Manufacturing	110	390	500	650	960	1,490	2,000	2,660	2,950	3,010
Wholesale trade	170	410	660	890	1,250	1,630	2,040	2,510	2,990	3,430
Retail trade	320	1,020	1,920	2,830	4,340	6,160	8,270	10,870	13,770	16,460
Transportation and warehousing	30	90	170	270	550	980	1,840	2,900	3,660	4,320
Information and cultural industries	30	80	90	200	330	650	850	910	970	1,190
Finance and insurance	50	100	190	210	230	290	330	560	610	840
Real estate and rental and leasing	20	70	140	240	380	460	540	740	830	890
Professional, scientific and technical services	230	610	890	1,290	1,920	2,850	4,100	5,130	6,090	7,200
Management of companies and enterprises	10	20	30	40	80	90	170	320	280	320
Administrative and support, waste management and remediation services	120	230	400	620	1,290	1,660	2,330	3,600	3,120	3,770
Educational services	30	120	290	410	530	810	1,180	1,390	1,680	1,840
Health care and social assistancee	150	530	840	1,120	1,680	2,400	3,550	4,790	6,230	7,410
Arts, entertainment and recreation	10	30	100	120	170	260	340	340	390	430
Accommodation and food services	610	1,700	2,670	4,270	5,520	7,420	9,790	13,180	16,810	20,390
Other services (except public administration)	60	250	410	600	900	1,160	1,600	2,380	2,810	3,390
Public administration	220	130	220	x	x	x	x	x	x	x

x suppressed to meet the confidentiality requirements of the *Statistics Act*

1. Industry is defined by the 2-digit North American Industry Classification System (NAICS) 2012 code.

2. Employment is determined using the average labour unit (ALU) calculations (see Appendix A) and adjusted according to the immigrant owner's ownership share.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 21
Distribution of unincorporated self-employed immigrants and non-immigrants, by age group, 2010

	Distribution		
	number	percent	share of taxfilers
Immigrants[1]			
24 years of age and younger	35,860	4.7	0.098
25 to 34 years of age	126,940	16.6	0.150
35 to 44 years of age	232,120	30.4	0.217
45 to 54 years of age	238,230	31.2	0.251
55 years of age and older	130,350	17.1	0.216
All immigrants	763,490	100.0	0.199
Non-immigrants[2]			
24 years of age and younger	156,840	5.3	0.062
25 to 34 years of age	403,420	13.6	0.117
35 to 44 years of age	594,160	20.0	0.178
45 to 54 years of age	818,180	27.5	0.196
55 years of age and older	1,003,920	33.7	0.199
All non-immigrants	2,976,520	100.0	0.161

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.
Note: The sum of the figures may not correspond to the totals shown because of rounding.
Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 22
Distribution of primarily unincorporated self-employed immigrants and non-immigrants, by age group, 2010

	Distribution		
	number	percent	share of taxfilers
Immigrants[1]			
24 years of age and younger	21,790	5.2	0.060
25 to 34 years of age	65,440	15.8	0.077
35 to 44 years of age	119,910	28.9	0.111
45 to 54 years of age	127,900	30.8	0.134
55 years of age and older	80,150	19.3	0.132
All immigrants	415,180	100.0	0.108
Non-immigrants[2]			
24 years of age and younger	75,100	5.4	0.030
25 to 34 years of age	172,780	12.3	0.050
35 to 44 years of age	264,110	18.8	0.079
45 to 54 years of age	357,040	25.5	0.085
55 years of age and older	532,520	38.0	0.105
All non-immigrants	1,401,560	100.0	0.075

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.
Note: Figures may not amount to totals because of rounding.
Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 23
Average net self-employment income, T4 earnings and total earnings of unincorporated self-employed immigrants and non-immigrants, by quintiles of net self-employment income, 2010

	Average net self-employment income	Average T4 earnings[1]	Average total earnings[2]
		dollars	
Immigrants[3]			
Lowest quintile	-5,608	45,067	39,458
Low-middle quintile	1,017	30,651	31,667
Middle quintile	5,146	13,561	18,707
Middle-high quintile	11,249	6,269	17,518
Highest quintile	41,614	6,611	48,225
Non-immigrants[4]			
Lowest quintile	-7,511	47,313	39,802
Low-middle quintile	321	37,457	37,777
Middle quintile	3,469	24,980	28,449
Middle-high quintile	11,091	13,910	25,001
Highest quintile	67,912	11,424	79,337

1. Includes paid employment earnings (wages and salaries).
2. Average T4 earnings plus average net self-employment income.
3. Immigrants who have entered Canada since 1980.
4. Canadian-born population, plus immigrants who entered Canada prior to 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.
Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 24
Distribution of unincorporated self-employed immigrants with self-employment income, by education level at arrival, 2010

	Distribution of immigrants[1]		
	number	percent	share of tax filers
Education level at arrival			
High school or less	353,220	46.3	0.177
Some university	175,780	23.0	0.227
Bachelor's degree	164,220	21.5	0.216
Education greater than a bachelor's degree	70,280	9.2	0.229
All education levels at arrival	763,490	100.0	0.199

1. Immigrants who have entered Canada since 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.
Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 25
Distribution of primarily unincorporated self-employed immigrants, by education level at arrival, 2010

	Distribution of immigrants[1]		
	number	percent	share of taxfilers
Education level at arrival			
High school or less	200,020	48.2	0.100
Some university	97,410	23.5	0.126
Bachelor's degree	83,690	20.2	0.110
Education greater than a bachelor's degree	34,060	8.2	0.111
All education levels at arrival	415,180	100.0	0.108

1. Immigrants who have entered Canada since 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 26
Distribution of unincorporated self-employed immigrants, by source region, 2010

	Distribution of immigrants[1]					
	All self-employed			Primarily self-employed		
	number	percent	share of taxfilers	number	percent	share of taxfilers
Source region						
Unknown	39,840	5.2	0.218	23,460	5.6	0.129
English-speaking	87,600	11.5	0.216	43,080	10.4	0.106
Western Europe	42,900	5.6	0.247	22,300	5.4	0.129
Eastern Europe	103,170	13.5	0.259	61,820	14.9	0.155
North Africa and the Middle East	118,420	15.5	0.211	75,770	18.2	0.135
Africa, except North Africa and Middle East	21,950	2.9	0.127	10,970	2.6	0.063
India and the region	113,680	14.9	0.211	54,290	13.1	0.101
China and the region	87,740	11.5	0.208	50,770	12.2	0.120
Latin America	76,080	10.0	0.164	37,140	8.9	0.080
Southeast Asia	72,110	9.4	0.140	35,580	8.6	0.069
All source regions	763,490	100.0	0.199	415,180	100.0	0.108

1. Immigrants who have entered Canada since 1980.

Notes: English-speaking countries include the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa. The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 27
Distribution of unincorporated self-employed immigrants, by immigrant class, 2010

	Distribution of immigrants[1]		
	number	percent	share of total[2]
All immigrants			
All self-employed	229,940	29.9	0.155
Family class	303,100	39.7	0.155
Economic class	57,160	7.5	0.241
Business class	119,540	15.5	0.203
Refugees	56,130	7.4	0.191
Other	763,880	100.0	0.156
All immigrant classes			
Primarily self-employed immigrants	124,420	30.0	0.108
Family class	152,390	36.7	0.098
Economic class	38,970	9.4	0.164
Business class	69,660	16.8	0.115
Refugees	29,740	7.2	0.101
Other	415,100	100.0	0.108
All immigrant classes			
Principal applicants only			
All self-employed	170,890	..	0.227
Economic class	21,870	..	0.340
Business class			
Primarily self-employed immigrants	83,390	..	0.111
Economic class	16,380	..	0.255
Business class			

.. not applicable

1. Immigrants who have entered Canada since 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 28
Distribution of businesses owned by unincorporated self-employed immigrants and non-immigrants, by industry, 2010

	Distribution			
	Businesses owned by immigrants[1]		Businesses owned by non-immigrants[2]	
	number	percent	number	percent
Industry[3]				
Agriculture, forestry, fishing and hunting	10,360	1.5	220,400	11.9
Mining, quarrying, and oil and gas extraction	620	0.1	4,360	0.2
Utilities	330	0.0	2,620	0.1
Construction	93,340	8.8	177,170	9.5
Manufacturing	9,360	1.4	36,670	1.2
Wholesale trade	7,660	1.0	27,310	1.0
Retail trade	61,020	5.8	161,850	5.1
Transportation and warehousing	65,340	6.8	66,230	2.5
Information and cultural industries	7,350	1.0	30,780	1.1
Finance and insurance	16,130	2.2	47,120	1.7
Real estate and rental and leasing	257,090	35.1	918,280	32.9
Professional, scientific and technical services	69,140	9.4	280,310	10.1
Management of companies and enterprises	40	0.0	120	0.0
Administrative and support, waste management and remediation services	65,850	10.1	252,950	9.0
Educational services	8,350	1.2	29,540	1.0
Health care and social assistance	56,270	7.7	198,230	7.1
Arts, entertainment and recreation	11,020	1.6	60,770	5.2
Accommodation and food services	7,660	1.1	27,720	1.0
Other services (except public administration)	31,120	4.2	140,630	5.0
All industries	732,330	100.0	2,790,660	100.0

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.
3. Industry is defined by the 2-digit North American Industry Classification System (NAICS) 2012 code.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 29

Distribution of businesses owned by unincorporated primarily self-employed immigrants and non-immigrants, by industry, 2010

	Distribution of businesses			
	Immigrants[1]		Non-immigrants[2]	
	number	percent	number	percent
Industry[3]				
Agriculture, forestry, fishing and hunting	7,700	2.0	140,000	11.0
Mining, quarrying, and oil and gas extraction	700	0.1	5,070	0.5
Utilities	100	0.0	1,000	0.1
Construction	38,010	9.8	122,100	9.2
Manufacturing	6,270	1.6	17,850	1.3
Wholesale trade	5,450	1.1	13,000	1.0
Retail trade	26,000	6.5	90,030	6.9
Transportation and warehousing	38,990	10.0	66,060	5.1
Information and cultural industries	3,070	0.8	14,010	1.1
Finance and insurance	8,000	2.1	28,000	2.1
Real estate and rental and leasing	76,270	19.6	250,000	19.0
Professional, scientific and technical services	41,920	10.8	165,080	12.7
Management of companies and enterprises	90	0.0	70	0.0
Administrative and support, waste management and remediation services	32,910	10.7	146,180	11.2
Educational services	2,060	1.8	12,920	0.8
Health care and social assistance	30,910	10.7	138,050	10.6
Arts, entertainment and recreation	5,090	1.7	26,030	2.0
Accommodation and food services	6,020	1.5	13,040	1.0
Other services (except public administration)	22,100	5.7	86,000	7.1
All industries	388,140	100.0	1,328,130	100.0

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.
3. Industry is defined by the 3-digit North American Industry Classification System (NAICS) 2012 code.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Sources: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 30

Distribution of unincorporated primarily self-employed immigrants and non-immigrants, by gender, 2010

	Distribution		
	number	percent	share of total[4]
Immigrants[1]			
Male	241,250	59.1	5.1%
Female	173,750	41.8	3.9%
All immigrants	415,000	100.0	5.1%
Non-immigrants[2]			
Male	777,500	55.7	5.0%
Female	618,550	44.3	3.9%
All non-immigrants	1,397,350	100.0	4.5%

1. Immigrants who have entered Canada since 1980.
2. Canadian-born population, plus immigrants who entered Canada prior to 1980.

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Sources: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 31

Number and share of unincorporated self-employed immigrants, by age group at arrival and year, 2004 arrival cohort

	2005		2006		2007		2008		2009		2010	
	number	share of taxfilers	number	share of taxfilers	number	share of taxfilers	number	share of taxfilers	number	share of taxfilers	number	share of taxfilers
All self-employed												
24 years of age and younger	2,300	0.113	3,230	0.167	4,250	0.222	4,840	0.255	5,320	0.287	5,900	0.319
25 to 34 years of age	6,340	0.106	7,930	0.138	9,380	0.173	10,350	0.208	10,610	0.238	11,390	0.284
35 to 44 years of age	5,000	0.111	6,370	0.130	7,570	0.145	8,250	0.152	8,480	0.153	9,040	0.159
45 to 54 years of age	1,930	0.115	2,420	0.128	2,810	0.131	3,090	0.128	3,160	0.121	3,260	0.116
55 years of age and older	660	0.077	710	0.080	870	0.091	890	0.089	900	0.085	870	0.076
All age groups at arrival	16,230	0.108	20,660	0.134	24,880	0.159	27,410	0.174	28,470	0.183	30,450	0.196
Primarily self-employed												
24 years of age and younger	1,310	0.065	1,850	0.095	2,450	0.128	2,770	0.146	3,110	0.168	3,410	0.184
25 to 34 years of age	3,550	0.059	4,280	0.074	5,000	0.092	5,480	0.110	5,600	0.126	5,920	0.148
35 to 44 years of age	2,940	0.065	3,610	0.074	4,310	0.082	4,530	0.083	4,740	0.085	5,050	0.089
45 to 54 years of age	1,220	0.073	1,480	0.078	1,720	0.080	1,840	0.076	1,950	0.075	2,050	0.073
55 years of age and older	510	0.059	530	0.060	660	0.069	700	0.069	740	0.070	720	0.063
All age groups at arrival	9,530	0.063	11,760	0.078	14,140	0.090	15,310	0.097	16,130	0.104	17,140	0.111

Note: The sum of the figures may not correspond to the totals shown because of rounding.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 32
Share of immigrant taxfilers who are unincorporated self-employed, by source region and year, 2004 arrival cohort

	2005	2006	2007	2008	2009	2010
			share			
All self-employed						
Unknown	0.118	0.147	0.159	0.178	0.181	0.198
English-speaking	0.201	0.218	0.224	0.233	0.232	0.244
Western Europe	0.173	0.192	0.210	0.222	0.233	0.249
Eastern Europe	0.172	0.200	0.226	0.239	0.240	0.245
North Africa and the Middle East	0.093	0.125	0.158	0.177	0.189	0.205
Africa, except North Africa and the Middle East	0.055	0.064	0.075	0.086	0.099	0.111
India and the region	0.101	0.143	0.169	0.186	0.193	0.202
China and the region	0.091	0.118	0.152	0.171	0.189	0.213
Latin America	0.094	0.114	0.133	0.153	0.156	0.170
Southeast Asia	0.070	0.093	0.110	0.122	0.133	0.139
Primarily self-employed						
Unknown	0.080	0.094	0.119	0.123	0.118	0.141
English-speaking	0.103	0.110	0.109	0.113	0.114	0.122
Western Europe	0.087	0.096	0.109	0.113	0.120	0.122
Eastern Europe	0.116	0.131	0.150	0.156	0.155	0.156
North Africa and the Middle East	0.065	0.085	0.108	0.117	0.127	0.136
Africa, except North Africa and the Middle East	0.023	0.025	0.033	0.040	0.046	0.052
India and the region	0.048	0.069	0.084	0.090	0.093	0.096
China and the region	0.055	0.067	0.084	0.092	0.109	0.125
Latin America	0.054	0.060	0.066	0.076	0.078	0.086
Southeast Asia	0.041	0.052	0.058	0.065	0.070	0.071

Note: English-speaking countries include the United States, the United Kingdom, Ireland, Australia, New Zealand and South Africa.
Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 33
Share of immigrant taxfilers who are unincorporated self-employed, by immigrant class and year, 2004 arrival cohort

	2005	2006	2007	2008	2009	2010
			share			
All self-employed						
Family class	0.102	0.126	0.153	0.167	0.177	0.189
Economic class	0.106	0.135	0.159	0.177	0.187	0.203
Business class	0.166	0.199	0.218	0.228	0.247	0.260
Refugees	0.102	0.129	0.154	0.170	0.172	0.183
Other	0.125	0.142	0.153	0.162	0.168	0.169
Primarily self-employed						
Family class	0.062	0.076	0.092	0.100	0.107	0.114
Economic class	0.059	0.072	0.084	0.091	0.096	0.102
Business class	0.122	0.139	0.153	0.155	0.180	0.196
Refugees	0.061	0.075	0.089	0.100	0.105	0.114
Other	0.075	0.081	0.090	0.090	0.092	0.091

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Table 34

Number and share of unincorporated self-employed immigrants and non-immigrants who own firms with paid employees, by year, 2004 cohort

	2005		2006		2007		2008		2009		2010	
	number	% share of taxfilers	number	% share of taxfilers	number	% share of taxfilers	number	% share of taxfilers	number	% share of taxfilers	number	% share of taxfilers
All self-employed												
Immigrants[1]	370	2.3	550	2.7	690	2.8	720	2.6	780	2.7	940	3.1
Non-immigrants[2]	7,350	3.6	8,450	3.8	9,730	4.1	10,340	4.0	11,060	4.2	12,370	4.4
Primarily self-employed												
Immigrants	240	2.5	350	3.0	450	3.2	490	3.2	530	3.3	630	3.7
Non-immigrants	4,760	5.8	5,420	6.2	6,270	6.5	6,700	6.6	7,100	6.8	7,680	7.1

1. Immigrants who have entered Canada since 1980.

2. Canadian-born population, plus immigrants who entered Canada prior to 1980, who were aged 25 to 29 in 2004.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

Appendix A: The data files

The data are from the Canadian Employer-Employee Dynamics Database (CEEDD), a set of large administrative files that can be linked together based on a unique individual identifier (the social insurance number [SIN]), a unique business identifier (the business number [BN][26]), or both. The main components of the CEEDD include annual personal income tax records (T1 records), financial declaration (FD) and business declaration (BD) files for owners of unincorporated businesses, corporate income tax records (T2 records), records of remuneration issued by corporations to their employees (T4 records), corporate shareholder information (the Schedule 50), enterprise information from the Longitudinal Employment Analysis Program (LEAP), and immigrant records from the Longitudinal Immigration Database (IMDB). Individual income tax records are available for the period from 1982 to 2010; however, corporate tax records are available only from 2001 onwards.

The wide range of administrative files incorporated into the CEEDD is not its only unique feature. All files in the CEEDD are 100% files, so that the T1 records, for instance, include all individual tax records in a particular year, and the T2 records include all incorporated businesses. The LEAP universe covers all incorporated and unincorporated businesses that hire and pay employees in Canada (LEAP records are based on information from the Business Register and the Survey of Employment, Payrolls and Hours). Annual T2 records linked to the LEAP records for the same enterprises (using their BNs) therefore cover all incorporated enterprises with employees. These companies are included in the study.

Schedule 50 and shareholder information

The Schedule 50 is part of the T2 corporate tax return. All private corporations that identify themselves as Canadian-controlled (controlled by a Canadian citizen or permanent resident) must file a Schedule 50 to provide information on shareholders with at least 10% of common or preferred shares. It gives details about the corporation that files the Schedule 50 (the BN), and identifies shareholders with at least 10% of shares, the percentage of shares owned, and the type of shares owned.

Three types of shareholders are identified in the Schedule 50: corporate, individual and trust. For each type of owner, the identification number is provided (the SIN in the case of an individual shareholder). This is an essential piece of information with which the link between individual owners and their corporations is established. However, that information is not complete. First, for instance, about 88% of shareholders had valid identification numbers (a BN, a SIN, or a trust number) in 2009. Among the shareholders with valid identification, the majority, more than 80%, were individual owners. Second, not all private corporations file a Schedule 50. Overall, about 18% of private businesses did not file a Schedule 50, or filed a Schedule 50 form with missing shareholder information, in 2009. Table A.1 shows filing rates computed as a share of private corporations with paid employees and a matched Schedule 50 among all private corporations with paid employees. The rates are high—at least 85%—for smaller businesses (businesses with fewer than 10 employees) but drop sharply as the firm size increases, down to less than 36% for businesses with more than 300 employees. A closer inspection of the filing rates reveals that the rates are particularly low for Crown corporations (i.e., enterprises owned by federal and provincial governments) and firms with a large number of small shareholders, such as co-operatives (e.g., gas co-operatives in rural areas), professional associations, and sports federations. The low filing rates in these types of enterprises are consistent with lower filing rates observed in industries with

26. Not every business requires a BN. However, if a business engages in activities related to employment, the goods and services tax, or imports and exports, then it requires a BN. A BN is a 15-digit number assigned by the Canada Revenue Agency, consisting of three parts: a nine-digit BN root that identifies a specific business, a two-letter account identifier that indicates the type of account, and a four-digit account number.

a large presence of Crown corporations and various professional associations, such as public administration, utilities, and educational services.

Table A.1
Proportion of private corporations with positive employment that filed a Schedule 50, 2010

Corporation characteristics	Proportion[1]
	percent
Firm size	
0 to 0.99	88.4
1 to 1.99	89.0
2 to 2.99	89.2
3 to 4.99	88.9
5 to 9.99	88.0
10 to 49.99	85.4
50 to 99.99	77.5
100 to 299.99	67.4
300 and more	36.2
Industry[2]	
Unknown	84.8
Agriculture, forestry, fishing and hunting	94.2
Mining, quarrying, and oil and gas extraction	90.1
Utilities	58.1
Construction	90.4
Manufacturing	84.9
Wholesale trade	84.7
Retail trade	88.2
Transportation and warehousing	87.7
Information and cultural industries	85.6
Finance and insurance	85.2
Real estate and rental and leasing	86.4
Professional, scientific and technical services	89.7
Management of companies and enterprises	88.4
Administrative and support, waste management and remediation services	87.0
Educational services	84.9
Health care and social assistance	90.8
Arts, entertainment and recreation	81.4
Accommodation and food services	84.4
Other services (except public administration)	85.8
Public administration	33.3
Regions	
Atlantic	83.0
Quebec	87.8
Ontario	84.9
Prairies	90.8
Alberta	91.1
British Columbia	90.5
Other	81.3

1. Number of incorporated private firms that filed a T2 and a Schedule 50 divided by the number of incorporated private firms that filed only a T2.

2. Industry is defined by the 2-digit North American Industry Classification System (NAICS) 2012 code.

Source: Statistics Canada, Canadian Employer-Employee Dynamics Database.

To ensure that this non-filing does not result in an underestimate of the total count of private businesses and their employment, a weight is computed as the ratio of the total number of private enterprises with paid employment divided by the total number of private enterprises with paid employment that have filed a valid Schedule 50. This weight is applied to each observation. A Schedule 50 is deemed valid if it contains sufficient information to identify at least one individual owner. A T2 private corporation with positive paid employment that has no matching Schedule 50 or has an incomplete Schedule 50 with missing identification information for individual owners would count toward non-response. Private firms with paid employment are identified by linking annual T2 files to LEAP data. The weights are computed separately for each region, industry, and firm-size cell to take into account the cross-industry, cross-firm size and cross-regional differences in filing rates observed in the data.[27] It is also worth mentioning that applying these weights to business counts renders such counts (and associated characteristics and employment) equal to the known total, derived from the T2 data. Since the non-response is generally quite low, the reweighted results are deemed reliable.

The Schedule 50 provides information only on direct ownership. It is possible for Person A to own Company B, which in turn owns Company C, making Person A also an ultimate owner of Company C. If this type of ownership is not taken into account, it would result in an underestimate of ownership. For this reason, ownership was traced backwards, and the corresponding ownership share was computed as multiplicative across iterations of ownership.[28] Meanwhile, two types of shares are reported in the Schedule 50, common and preferred shares, although only one or the other is reported most of the time. For owners who reported both types of ownership, the average of the two ownership shares is defined as a single measure of ownership share.

All corporate tax schedules, including the Schedule 50, are filed on a fiscal-year basis. However, all individual tax schedules (T1 records) are filed on a calendar-year basis. This creates consistency problems when one tries to link T2 records and Schedule 50 records to files based on the calendar year, such as T1 records, the IMDB and T4 records. Hence, the Schedule 50 and other T2 records have been 'calendarized.' Leung and Lafrance (2010) describe the process in detail. Essentially, it involves combining multiple fiscal-year records for the same business that cover a full calendar year and producing weighted averages with weights reflecting the number of days in the calendar year covered by each fiscal-year record.[29] Not all variables were calendarized in the same way. For instance, the firm type (private or public) in a particular calendar year is defined as the firm type that is prevalent in the fiscal period that covers the most of that particular calendar year.

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27. The reweighting is based on the assumption that, within each cell, businesses that do not file a Schedule 50 are similar to those that do.
28. More specifically, if Person A owns Business B, then the BN of Business B is compared with all the BNs of corporate owners in Schedule 50 forms. If there is match with Business C, for example, then the iteration is continued, and the owners of Business C are compared with all corporate owners again, until no more matches are found. If there are multiple matches, say with businesses C and D, then each of them is matched separately and iteratively. Person A would then have a list of owned businesses, say B, C and D. Person A's ownership share of each company depends upon how far the iteration goes. Because of the iteration, the final ownership share is the multiple of the shares for each round of the iteration. For example, if Person A owns 50% of Business B, and Business B owns 50% of Business C, and Business C owns 25% of Business D, then Person A owns 0.5 x 0.5, or 25%, of Business C, and 0.5 x 0.5 x 0.25, or around 6%, of Business D. It is also possible for Person A to own Business B, which in turn owns Business C, and for Person A to own Business D, which also owns Business C. Although, in the end, Person A owns Business C, the sequence is different: A, B, C versus A, D, C. The share of Business C should be the sum of shares for each sequence.
29. Suppose a fiscal year starts on April 1 and ends on March 31 the next calendar year. Producing data for the 2004 calendar year would require information from the 2003/2004 and 2004/2005 fiscal years; the former covers 90 days (January 1 to March 31) and the latter covers 275 days (April 1 to December 31) of 2004. These numbers are reflected in the weights used to produce calendarized variables for 2004.

T1 financial declaration and business declaration

The T1 FD and T1 BD are schedules similar to Schedule 50, but for unincorporated self-employed businesses. The T1 FD lists all the financial declarations that include an individual's SIN, the BN for the business, the name and address of the business, the industry coding and a list of fields in which the filer may insert the financial statements of the business. While the T1 FD is at the individual level, the T1 BD is at the business level. Both are reported on a calendar-year basis. Six types of unincorporated businesses are covered in the T1 FD and the T1 BD: real-estate rental, limited partnership, professional, fishing, farming, and commission. Hence, linking the T1 FD with the IMDB can identify the immigration status of self-employed individuals.

To determine whether self-employed individuals have employees, they are linked to the LEAP file using the BN. However, since most of the self-employed do not have employees, many do not have a BN. For example, there were about 4 million T1 unincorporated businesses in 2009, but only 30% of them had a BN with which they could be linked to the LEAP to derive an employment measure (an average labour unit [ALU] count). However, because self-employed people with employees are legally required to have a BN, the vast majority of them would have one, allowing them to be linked to the LEAP file. The T1 FD and the T1 BD are only available from 2005 onwards, so the analysis of self-employment job creation can be done only for years after that date.

Longitudinal Immigration Database

The IMDB includes records for all immigrants who have arrived in Canada since 1980 and who filed a tax return at least once after their arrival; immigrants who arrived before 1980 cannot be identified. The IMDB contains individual information on the characteristics of immigrants recorded at the time they acquired permanent resident status in Canada (or landed immigrant status, as it was known in the past). These characteristics include age, gender, marital status, level of education, immigrant class, country of origin, official language proficiency and SIN.[30]

It is important to note that the year in which an immigrant becomes a Canadian permanent resident is not necessarily the year when the immigrant first arrives in Canada. A substantial number of immigrants who eventually become permanent residents come to Canada as temporary workers, students or refugee claimants, and some of them file tax returns before becoming permanent residents. However, given the scope of the current study and the limited opportunities for such individuals to participate in business activity before becoming permanent residents, the year of arrival is defined as the year in which an immigrant becomes a Canadian permanent resident.

A considerable number of immigrants are initially issued temporary SINs, replaced by permanent ones once they receive permanent resident status. Since the SIN is a unique identifier used to track individuals over time, it is essential to account for such changes. The Canada Revenue Agency (CRA) maintains a file that records all SIN changes. This file is used to create a longitudinal SIN, a unique individual identifier that remains constant.

Longitudinal Employment Analysis Program dataset

The LEAP contains all enterprises in Canada that have reported positive payroll data to the CRA since 1983. It provides information on the annual payroll of firms, the size of firms (their employment), and a four-digit North American Industry Classification System code. The annual payroll information allows for the identification of active enterprises with employees (businesses with a positive payroll). The industry code provides information about the industry to which the enterprise belongs. The firm size information is based on two measures of employment: an ALU and an individual labour unit (ILU). The former is derived from the enterprise's total annual payroll

30. This information is not updated in subsequent years.

divided by the average annual earnings of a typical worker employed in the enterprise's four-digit industry, province and the number of T4s issued by the enterprise (Leung and Lafrance 2010). The latter is based strictly on payroll records; it is a weighted sum of all T4s issued by an enterprise with weights representing the share of an individual's T4 earnings received from that enterprise in the total annual earnings of the individual.[31] Both measures are designed to overcome an essential problem related to extracting a stock estimate from flow measures. While it is possible to simply count the total number of T4s issued by a firm in a given year, this head count reveals little about the size of the enterprise on a particular date or the average employment level during that year in the absence of information on the time and duration of the employment.

Both the ALU and the ILU have their pros and cons, and employment estimates based on each may differ quite substantially. In principle, it would be possible to estimate employment using both measures and generate two different sets of results based on each measure. In practice, however, this would dramatically lengthen the paper, result in a lot of repetition, and sidetrack the paper into a discussion about the relative merits of the ALU and the ILU. Although this is an important topic, it is well beyond the scope of this paper. Leung and Lafrance (2010) use the ALU as their preferred measure of employment, as do most other studies based on the LEAP. Following the lead of previous research, employment estimates generated in this study are based on the ALU measure.

The enterprise (not the establishment) is the main unit of analysis in the LEAP. An enterprise may have multiple BNs and multiple payroll accounts for each BN.[32] The ALU measure in the LEAP is also at the enterprise level. Since the link between the Schedule 50, the T1 FD and the T1 BD, and the LEAP is based on the BN level, the ALU measures in the LEAP need to be disaggregated to the BN9 level. This is done by allocating the ALUs at the enterprise level to the BN9 units, proportional to the BN9 units' share of the total payroll of the enterprise.

31. For instance, if an individual worked part of the year in Firm A and received a T4 for $20,000, and also worked part of the year in Firm B and received a T4 for $60,000, then the individual's contribution to the ILU count is 0.25 for Firm A (a quarter of the total) and 0.75 for Firm B.

32. An employer is required to have at least one BN payroll account, but can also have more than one account, in which case each account has a separate entry in the LEAP.

Appendix B: Methodological issues

As mentioned above, some immigrants are observed in administrative data (individual or corporate tax returns) before becoming permanent residents (before the year considered to be the arrival year). While these immigrants are retained in the sample, the years before the arrival year are excluded. This is done primarily to avoid analytical inconsistencies caused by limited opportunities for immigrants to establish a business in Canada before they become permanent residents. Another restriction imposed on the sample pertains to age: only those who are aged 18 to 69 in any given year (regardless of the age at arrival) are included in the analysis. For instance, immigrants from the 2001 entering cohort who were 17 in 2005 are excluded from the analysis in 2005 but are included in the analysis in 2006 and subsequent years. The rationale for this restriction becomes apparent when one computes the share of immigrant business owners in 2005 among immigrants from a particular cohort. Including all immigrants from that cohort (regardless of their age) would produce an inconsistent measure of ownership dynamics because of the shifting age distribution in the denominator. In other words, all children aged 0 to 17 would be included in the denominator in the first year after arrival, even though the vast majority of them are not likely to establish a business. In the last year, the share of children in the denominator would be much smaller.

Another important issue concerns the separation of the real births and deaths of firms from the false ones. The Longitudinal Employment Analysis Program (LEAP), designed to analyze business and employment dynamics, uses the concept of labour tracking to deal with false births and deaths of firms. When, for instance, a cluster of employees from a defunct firm is identified in a new firm in the next year, the relationship is further investigated. An algorithm that compares the names and activities of the two firms and examines shared business numbers (BNs) is employed to determine whether a firm's death is real or false. If the death is deemed false, the same longitudinal Business Register identification number (LBRID) is assigned to both firms (the old and the new). In a similar fashion, labour tracking is used to deal with mergers and acquisitions.

Hence, each business entity in the LEAP ('enterprise') has a Business Register identification number and an LBRID. However, there is no longitudinal BN. Since the study uses BNs as the primary unit of analysis, distinguishing between real and false births and deaths at the BN level is a more challenging task. Nevertheless, labour tracking at the enterprise level usually provides sufficient clues about what happens to the businesses that constitute the enterprises. For the longitudinal part of the analysis in this study, one of the potential advantages of this approach is that firms can be tracked if they change their status from private to public from one year to the next. However, the transition from private to public is rare. Between 0.04% and 0.1% of all private incorporated firms made the transition to public status in any given year between 2001 and 2009. The percentage is likely lower among new immigrant-owned firms, which are very small. Because transitions are so few, they are not considered in this analysis.[33]

Another important methodological issue is related to the estimation of employment generated by unincorporated self-employed individuals. Since one of the main goals of the study is to estimate the total employment generated by all immigrant entrepreneurs, it is important to use a consistent measure of employment for estimates produced for incorporated and unincorporated businesses and business owners. Relatively few unincorporated self-employed immigrants have paid employees. For those who do, employment estimates based on average labour units covering paid employees can be obtained directly from the LEAP using BNs from the individuals' T1 financial declaration records.

33. When dealing with such a limited number of firms, confidentiality becomes a concern. This is one of the reasons why this issue has not been pursued any further.

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